Keyboard

keyboardmag.com

STAGE SKILLS • STUDIO SMARTS

PINK MARTINI

THOMAS LAUDERDALE ON BANDLEADING FROM BEHIND THE PIANO

LESSONS

- ADD A NOTE, GET JAZZ
- SESSION PLAYER CHEAT SHEET

ROBERT WALTER ON PLAYING VINTAGE KEYS

IN-DEPTH REVIEWS

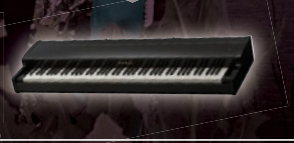
ARTURIA MICROBRUTE
Bad-Ass Analog Under $300

ABLETON LIVE 9
The DAW as Musical Instrument Evolves

PUSH
Best Controller for Live Yet!

YAMAHA CP4
The Ultimate Stage Piano?

KAWAI VPC-1
Less Talk, More Action

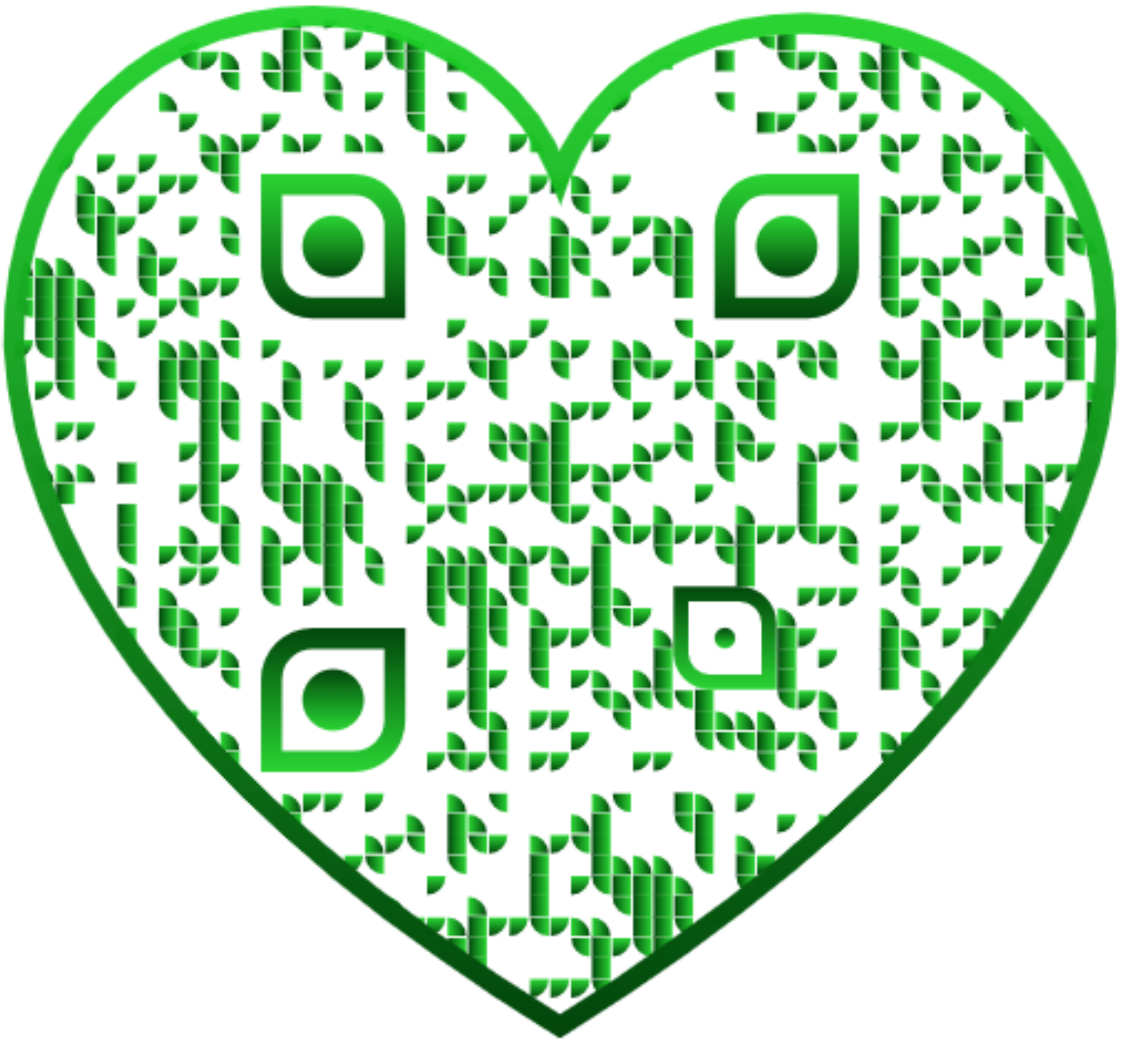


EASTWEST
StormDrum 3

NewBay Media

01.2014 | $5.99

A MUSIC PLAYER PUBLICATION



THE
CRYSTAL
METHOD
PRE-ORDER THE
NEW ALBUM NOW
WWW.THECRYSTALMETHOD.COM
CASIO
XW-G1
Featuring:
XW
CASIO
www.casiomusicgear.com

WE SPEAK KEYBOARD (AND MORE!)

SWEETWATER HAS THE MOST KNOWLEDGEABLE STAFF, TOP BRANDS, AND COMPETITIVE PRICES

moog
Sub Phatty

Focusrite
Spirit Professional

AKG by HARMAN
C 414 XL II

Everything You Need – from Studio Recording Equipment to Live Sound Gear – Call Today!

JBL PROFESSIONAL by HARMAN
LSR308

GRACE design m101

Ableton Push with Live 9 Intro

24 MONTHS SPECIAL FINANCING AVAILABLE

ON SELECT BRANDS, USING YOUR SWEETWATER MUSICIAN'S ALL ACCESS PLATINUM CARD, THROUGH JANUARY 31, 2014*

Sweetwater

Music Instruments & Pro Audio

(800) 222-4700
Sweetwater.com

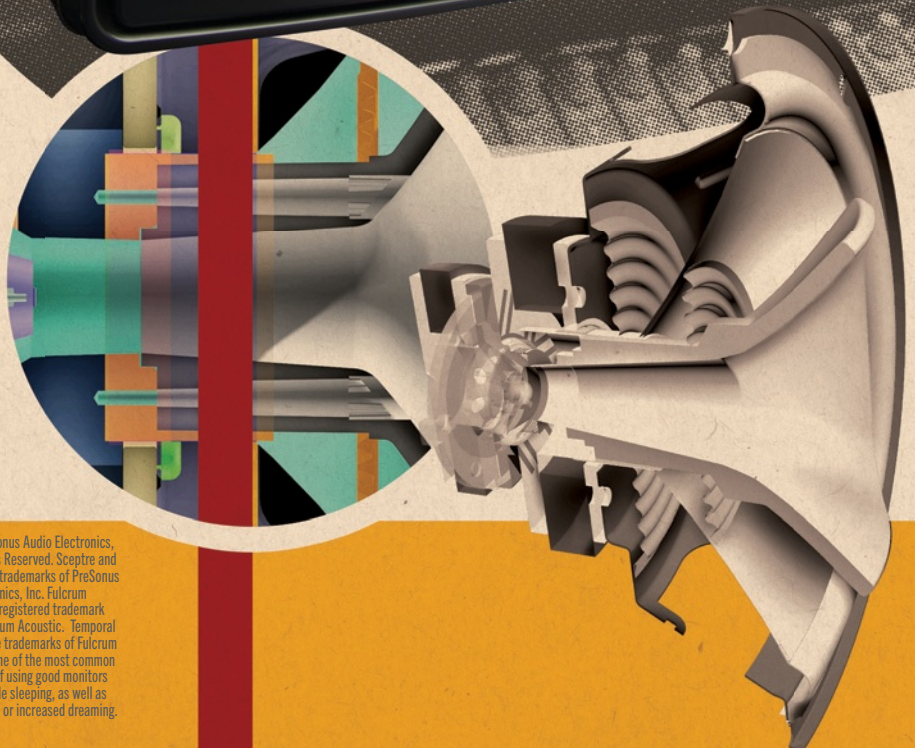
FREE SHIPPING — On most orders, with no minimum purchase!

2-YEAR WARRANTY** — Total Confidence Coverage™ Warranty

FREE PRO ADVICE — We're here to help! Call today!

*Subject to credit approval. Minimum monthly payments required. Call your Sweetwater Sales Engineer for details or visit Sweetwater.com/financing.
**Please note: Apple products are excluded from this warranty, and other restrictions may apply. Please visit Sweetwater.com/warranty for complete details.

SCEPTRE™ COACTUAL™



Seasoned Keyboard magazine readers make their own listening decisions.

So attempting to ***tell*** you how our Sceptre™ 6 and 8 monitors sound is an exercise in futility.

Yes, we can wax poetic about how our CoActual™ transducer design, internal ARM processor running Fulcrum Acoustic®'s Temporal EQ™ DSP voodoo solves the inherent problems of coaxial design — while retaining its overwhelming benefits.

But it all comes down to a critical listening session with Sceptre (and whatever brand you *previously* thought was the best high-end, 2-way monitor).

Visit your PreSonus dealer today.

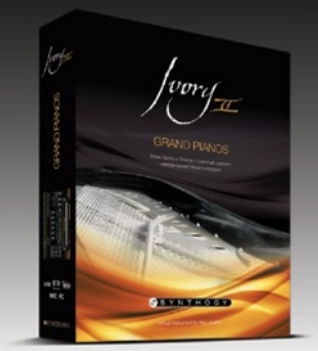
©2013, PreSonus Audio Electronics, Inc, All Rights Reserved. Sceptre and CoActual are trademarks of PreSonus Audio Electronics, Inc. Fulcrum Acoustic is a registered trademark of, well, Fulcrum Acoustic. Temporal EQ and TQ are trademarks of Fulcrum Acoustic. Some of the most common side effects of using good monitors include trouble sleeping, as well as vivid, unusual or increased dreaming.

PreSonus

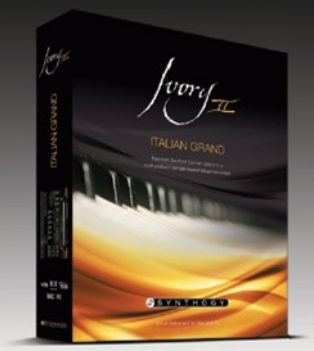
Baton Rouge, USA • www.presonus.com

Ivory II

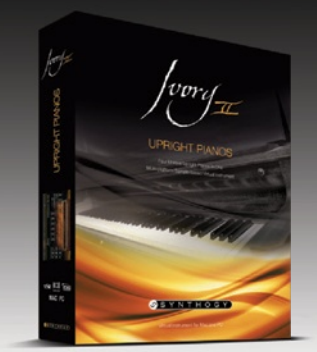
"… if you want one software piano that can cover any musical genre, is equally facile onstage or in the studio, and makes zero sonic compromises, Ivory II is the platinum standard. Long live the king!"
—KEYBOARD MAGAZINE



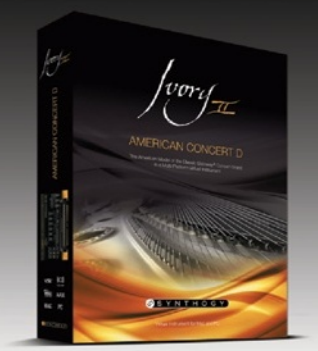
Ivory II
Grand Pianos



Ivory II
Italian Grand



Ivory II
Upright Pianos



Ivory II
American Concert D

SYNTHOGY

ivory2.com

ILIO

Contact your favorite dealer!

800.747.4546 www.ilio.com

CONTENTS

JANUARY 2014

Keyboard
STAGE SKILLS · STUDIO SMARTS

TALK

10 Voices from the *Keyboard* community.

NEW GEAR

12 Our monthly update of the most interesting musical instruments, software, and pro audio gear to come out of the industry.

HEAR

14 PINK MARTINI
The "little orchestra" that started out playing political events in Portland, Oregon, has grown into an international phenomenon. Their multi-lingual, multi-instrumental cocktail of standards and originals has earned them a large and devout fan base that sells out halls across the globe. We talk to mastermind **Thomas Lauderdale** about leading the band from behind the piano and all things Pink.

AUTUMN-DE-WILDE

20 ROAD WARRIORS
Robert Walter, the funkiest vintage keys player you may not have heard of, talks about the Rhodes, his influences, and today's keyboard scene.

AARON REDFIELD

22 TALENT SCOUT
Leo Genovese, keyboardist for Grammy-winning bassist Esperanza Spalding.

CARLOS PERICAS

PLAY

26 COLD FUSION
Synth Solo Ideas from renowned jazz-fusion master **Jeff Lorber**

28 POP
Kimmel keysman Jeff Babko's **Session Keyboardist Cheat Sheet**

30 JAZZ
Scott Healy on spicing up chords with **One Note to Jazz**

KNOW

36 BEYOND THE MANUAL
A new column from music production wizard **Craig Anderton** on getting the most from your home studio. This month: **Tips 'n' Tricks for Loops 'n' Beats**.

38 THE ART OF SYNTH SOLOING
Programming tips from Kurzweil sound designer **Dave Weiser**

40 ON THE GIG
Get the most out of **Working with a Gig-Supplied Sound Engineer**

42 BACKTRACK
Managing **Levels, EQ, and Dynamics** for your live backing tracks

44 DANCE
Create **Dramatic Filter Swells**

REVIEW

46 DAW
Ableton **Live 9**

50 PAD CONTROL
Ableton **Push**

52 STAGE PIANO
Yamaha **CP4 Stage**

54 CONTROLLER
Kawai **VPC-1**

56 ANALOG SYNTH
Arturia **MicroBrute**

60 DRUM LIBRARY
EastWest Quantum Leap **StormDrum 3**

64 APP
One Red Dog Media **Arctic ProSynth**

CODA

66 Five things classical piano-playing siblings **The 5 Browns** have learned about **Interpreting Music**

Online Now!

First look: Yamaha Tyros 5 arranger workstation.

keyboardmag.com/january2014

KEYBOARD (ISSN 0730-0158) is published monthly by NewBay Media, LLC 1111 Bayhill Drive, Suite 125, San Bruno, CA 94066.

All material published in KEYBOARD is copyrighted © 2013 by NewBay Media. All rights reserved. Reproduction of material appearing in KEYBOARD is forbidden without permission. KEYBOARD is a registered trademark of NewBay Media.

Periodicals Postage Paid at San Bruno, CA and at additional mailing offices. POSTMASTER: Send address changes to KEYBOARD P.O. Box 9158, Lowell, MA 01853. Canada Post: Publications Mail Agreement #40612608. Canada Returns to be sent to Bleuchip International, P.O. Box 25542, London, ON N6C 6B2.

Extra. Special.

Dave Smith Instruments' **Mopho** family of analog synthesizers is, hands down, the most full-featured line of synths in its class. In response to requests from players, the new **Mopho Keyboard Special Edition** adds another octave of full-sized, velocity- and pressure-sensitive, semi-weighted keys, while maintaining a compact footprint that's perfect for the project studio or musicians on the go. Also new is a full complement of the Prophet 12's great looking—and even better feeling—soft-touch knobs. In studio, on stage, and everywhere in between, it's a **Mopho**.

Mopho Keyboard Special Edition. Portable. Affordable. Analog.

The Mopho Family of Products: Mopho ▪ Mopho Keyboard ▪ Mopho Keyboard SE ▪ Tetra ▪ Mopho x4

Visit davesmithinstruments.com for more information about the Mopho Keyboard SE or any DSI product.

Dave Smith INSTRUMENTS

Designed and built in San Francisco, California, USA

Made in SF San Francisco

PowerTools... for Reamping!

"The Reamp® is the recording guitar player's best friend. It works great with bass and keyboards too."
~ Joe Satriani

"The Radial JD7 is by far the finest guitar distro and Reamp and is an indispensable studio tool for me."
~ Steve Vai

"The X-Amp Reamper and SGI are so useful that I don't know how I managed before without them."
~ Simon Gogerly
(U2, Gwen Stefani, P. Diddy)

"Once you hear the difference between a Radial DI and the others, you'll never go back. After over 300 U2 shows around the world, they have worked flawlessly."
~ Terry Lawless
(Keyboardist & programmer - U2)

"Incomparable quality, deep features and tone, tone, tone! The Radial JD7 gives me the cleanest and punchiest guitars no matter what combination of gear is plugged in."
~ Eric Liljestrand
(Lucinda Williams, U2, Ringo Starr)

Radial X-Amp™ 500 series Reamp®
A dual output active studio Reamper for your Radial Workhorse™ or other 500 Series rack.

Reamp® ProRMP™
Affordable passive transformer isolated Reamper that doesn't skimp on sound quality!

Radial JD7™ guitar distro & Reamper™
Switch and combine up to 7 amps! Class-A buffers and Jensen™ transformer isolation for best possible sound. The JD7 is a must for every recording studio!

Radial JX44™
Stage switcher with Reamper lets you switch and combine up to six amps. Built-in SGI™ and Reamp interface. Guitar switcher lets you switch between up to 4 instruments at the press of a footswitch.

Reamp® JCR™
Original Reamp circuit designed by John Cuniberti, with same custom made in USA transformer. A passive Reamper that is plug-and-play easy to use. Features level control, filter and mute switch. Built Radial tough!

Radial Reamp® X-Amp™
Versitile transformer isolated studio Reamper with dual outputs to send your signal to different amps or effects chains. 100% discrete signal path for best possible sound.

Reamping is all about recording the optimum performance first, then sending the raw recorded track out later through different amps, effects and combinations to get the sound just the way you want it. Reamping opens up the creative process to discovering new tones, exploring effects, experimenting with micing techniques and all without having to capture the performance over and over. You can Reamp just about anything you record... bass, snare drum, keyboards... you can even get creative and add grit and character to the lead vocal by Reamping it through a distortion pedal or wahwah.

Radial offers a wide range of Reampers that deliver superb audio quality, are easy to use and priced to suit every budget.

Radial - the number one name in Reamping*!

Specifications and appearance are subject to change without notice.

Radial Engineering Ltd.
1588 Kebet Way, Port Coquitlam BC V3C 5M5
tel: 604-942-1001 email: info@radialeng.com

Radial® engineering ...power tools for power players™

radialeng.com

*Reamp, Reamper and Reamping are trademarks of Radial Engineering Ltd.

Keyboard
STAGE SKILLS · STUDIO SMARTS

VOL. 40, NO. 01 #454 JANUARY 2014

EDITORIAL DIRECTOR: Michael Molenda mmolenda@nbmedia.com
EDITOR IN CHIEF: Stephen Fortner sfortner@nbmedia.com
MANAGING EDITOR: Debbie Greenberg dgreenberg@nbmedia.com
EDITOR AT LARGE: Jon Regen
SENIOR CORRESPONDENTS: Jim Aikin, Craig Anderton, David Battino, Tom Brislin, Michael Gallant, Robbie Gennet, Scott Healy, Ken Hughes, Peter Kirn, John Krogh, Richard Leiter, Mike McKnight, Tony Orant, Francis Preve, Mitchell Sigman
EDITORIAL ASSISTANT: Grace Larkin
ART DIRECTOR: Damien Castaneda dcastaneda@nbmedia.com
MUSIC COPYIST: Matt Beck
PRODUCTION MANAGER: Amy Santana
PUBLISHER: Joe Perry jperry@nbmedia.com, 212.378.0464
ADVERTISING DIRECTOR, EASTERN REGION, MIDWEST & EUROPE: Jeff Donnenwerth jdonnenwerth@nbmedia.com, 770.643.1425
ADVERTISING DIRECTOR, WESTERN REGION & ASIA: Mari Deetz mdeetz@nbmedia.com, 650.238.0344
ADVERTISING SALES, EASTERN ACCOUNTS: Anna Blumenthal ablumenthal@nbmedia.com, 646.723.5404
SPECIALTY SALES ADVERTISING: Michelle Eigan meigan@nbmedia.com, 650.238.0325

THE NEWBAY MUSIC GROUP

VICE PRESIDENT PUBLISHING DIRECTOR: Bill Amstutz
GROUP PUBLISHER: Bob Ziltz
EDITORIAL DIRECTOR: Brad Tolinski
SENIOR FINANCIAL ANALYST: Bob Jenkins
PRODUCTION DEPARTMENT MANAGER: Beatrice Kim
DIRECTOR OF MARKETING: Chris Campana
MOTION GRAPHICS DESIGNER: Tim Tsuruda
SYSTEMS ENGINEER: Bill Brooks
CONSUMER MARKETING DIRECTOR: Meg Estevez
CONSUMER MARKETING COORDINATOR: Dominique Rennell
FULFILLMENT COORDINATOR: Ulises Cabrera
OFFICES SERVICES COORDINATOR: Mara Hampson

NEWBAY MEDIA CORPORATE

PRESIDENT & CEO: Steve Palm
CHIEF FINANCIAL OFFICER: Paul Mastronardi
CONTROLLER: Jack Liedke
VICE PRESIDENT, DIGITAL MEDIA: Robert Ames
VICE PRESIDENT, AUDIENCE DEVELOPMENT: Denise Robbins
VICE PRESIDENT, CONTENT & MARKETING: Anthony Savona
IT DIRECTOR: Anthony Verbanic
VICE PRESIDENT, HUMAN RESOURCES: Ray Vollmer

LIST RENTAL
914.925.2449
danny.grubert@lakegroupmedia.com

REPRINTS AND PERMISSIONS
For article reprints please contact our reprint coordinator at Wright's Reprints: 877.652.5295

SUBSCRIPTION QUESTIONS?
800-289-9919 (in the U.S. only) 978-667-0364
keyboardmag@computerfulfi llment.com
Keyboard Magazine, Box 9158, Lowell, MA 01853

Find a back issue
800-289-9919 or 978-667-0364
keyboardmag@computerfulfillment.com
Publisher assumes no responsibility for return of unsolicited manuscripts, photos, or artwork.

NewBay Media
BPA WORLDWIDE CONSUMER
Follow us on

KingKORG
SYNTHESIZER
"The KingKorg is AMAZING, the sounds are world class and it's portability helps me be mobile and program anywhere I need to be with the various artists I am working with. This board is a must have for me and anyone else needing classic synth bass and auxiliary sounds."
ADAM BLACKSTONE
MUSICAL DIRECTOR FOR
JUSTIN TIMBERLAKE / MAROON 5 / JAY-Z
RIHANNA / EMINEM / JANET JACKSON
DR. DRE / DEMI LOVATO / NICKI MINAJ
QUEEN LATIFAH
KORG
KORG.COM/KINGKORG
KingKORG SYNTHESIZER
KORG

Editor's Note

A huge part of what makes editing the magazine I grew up reading such a privilege is getting to work with amazing people. Here are just three, without whom *Keyboard* wouldn't be possible.

To call Craig Anderton a guru is an understatement. He's one of the original architects of this whole idea of musical instrument journalism. He now has a high-level gig at Gibson, so we won't see him reviewing any Fender amps (or Tom Oberheim synths) soon, but there's no conflict of interest in him sharing his how-to knowledge, as he now does in our new column "Beyond the Manual."

Jon Regen edits the music lessons in our PLAY section, no small part of which is wrangling the heavy-hitting musos whose bylines you see there. Jon is also an accomplished jazz pianist and singer-songwriter, from the star collaborations on his album *Revolution* to his Grammy-profiled therapeutic music project with Dr. Mitch Gaynor, *Change Your Mind*. He's never tooted his own horn in these pages, so I'm tooting it for him.

Francis Prève is an old-school synth geek cleverly disguised as an international DJ—our musician mole behind the lines of "press play." If you have a synth made any time in the last 20 years or so, chances are you've played patches he programmed.

I owe many, many others similar debts of thanks (including art director Damien Castaneda for great designs on impossible deadlines, and managing editor Debbie Greenberg for keeping me honest about meeting my own), and I'll continue to profile them in issues in which their work appears. Wishing you continued musical enjoyment and success in the new year!

Connect

- Comment directly at **keyboardmag.com**
- twitter.com **keyboardmag**
- facebook.com **KeyboardMagazine**
- SoundCloud.com **KeyboardMag**
- Keyboard Corner **forums.musicplayer.com**
- email **keyboard@musicplayer.com**

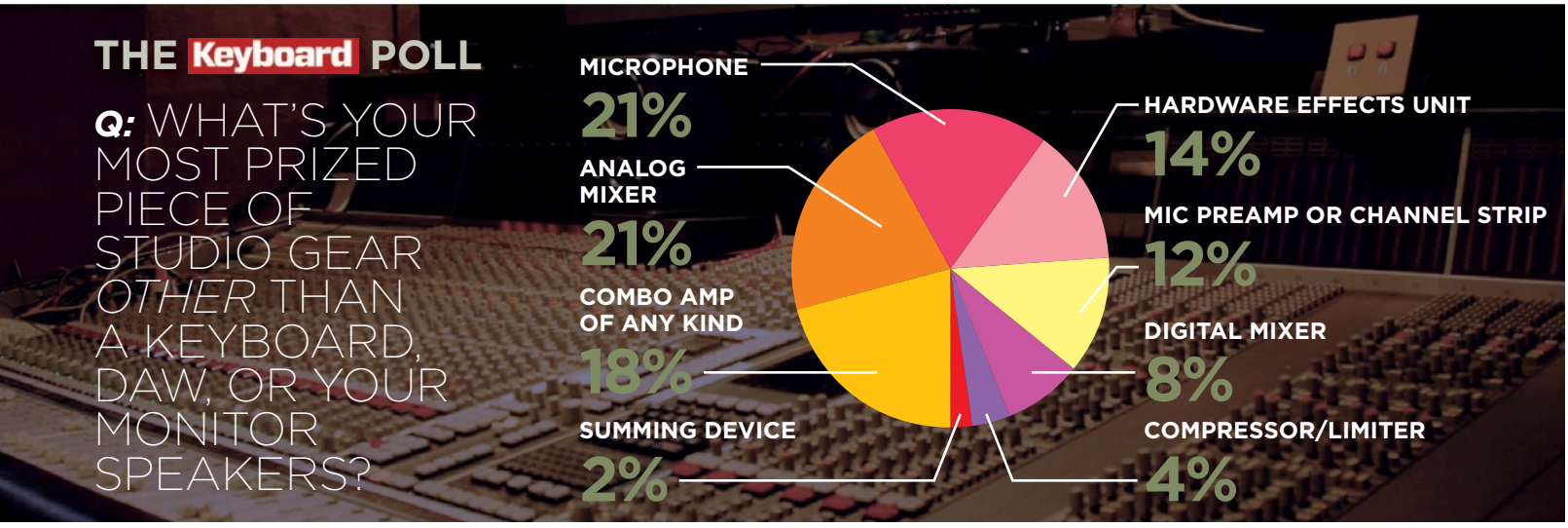
Stephen Fortner
Editor

Key Secrets Rocking in LA

The first few milliseconds of a sound define a lot of its character. In the '80s, when sample memory was expensive, Roland took advantage of this phenomenon to voice the popular D-50 synth (pictured). The D-50's unique sound came from splicing sampled attack transients onto synthesized sustaining tones, a process Roland called *Linear Arithmetic* (LA) synthesis. You can use this technique to punch up your own patches. Simply layer one sound with a fast attack, quick decay, and zero sustain with a sustaining sound that fades in more slowly. One of my favorite lead patches combines a trumpet attack with a female *ooh*. Even General MIDI patches can be a good source for attack transients. David Battino

THE Keyboard POLL

Q: WHAT'S YOUR MOST PRIZED PIECE OF STUDIO GEAR *OTHER* THAN A KEYBOARD, DAW, OR YOUR MONITOR SPEAKERS?



Polls rotate every two weeks, and can be found at the bottom of our homepage.

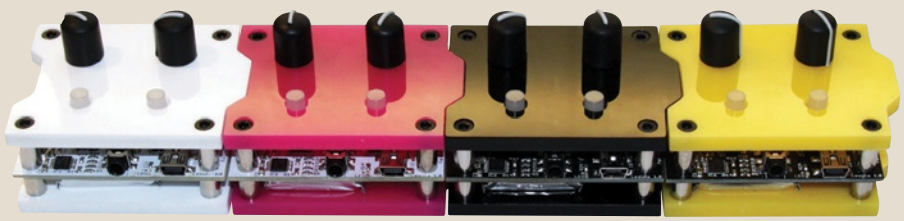
the PACKRAT™

Get the Packrat book!
umop.com/packratbook.htm

NEXT TECH » MODULAR SYNTHS GO LEGO

Want to build your own reconfigurable synth within a desktop space and impulse budget? Two new products are like modular gone Lego—or maybe Capsela, given that these actually *do* something when you put them together. **LittleBits**, maker of snap-together electronic circuits for educational projects, has teamed with **Korg** to produce the **Synth Kit**, which includes two oscillators, filter, envelope, splitter, micro-keyboard, delay, and more among its snap-together modules. There's more than one way to assemble them, as the starter projects in the 35-page booklet show. $159 | littlebits.com.

Patchblocks are DSP modules with multiple personalities. Blocks are hardware-identical, but you can program them by arranging icons (oscillators, filters, etc.) in a software editor, then unhook the USB cable and jam *sans* computer. Each Patchblock has stereo audio I/O and two assignable knobs and buttons. Each also has enough power to function as a self-contained basic synth (or drum machine, or sequencer, or effect), but it's when you snap two or more together that things get interesting. At press time, founder Sebastian Heinz was at nearly triple his funding goal on Kickstarter with almost a month to go, so we're confident we'll see his brainchildren in the real world soon. $TBD | patchblocks.com



My First *Gig-Ready Composition*. Helen Sung

The first piece that pianist and composer Helen Sung wrote—and considered strong enough to be performed in public—came to her soon after she graduated from the Monk Institute program, then at the New England Conservatory in Boston. While Sung was still a student, the program's Artistic Director, Ron Carter, "had us each compose a new piece for whenever he'd be in town to work with us, which was about every two weeks," she says. Once on her own, Sung channeled the discipline and lessons learned from composing for the master into an assignment of her own: creating a piece of music that would both challenge her as a composer *and* help her grow as a pianist. "I was working on the 'half-diminished *ii* to dominant *V*' progression, which had been giving me fits," she says, laughing, "so I thought, why not write a piece that used that progression so I could practice it in a musical way?" The result was "The Waiting Game," a tune Sung says was also inspired by how Dizzy Gillespie used the same progression in his piece "Woody 'n' You." Sung's newest album, *Anthem for a New Day*, is now available on Concord. Get the latest at helensung.com. | Michael Gallant

NEW GEAR

BY GINO ROBAIR

DAVE SMITH INSTRUMENTS MOPHO SE

WHAT Dual-oscillator, analog monosynth with resonant two- and four-pole filters, 44-note semi-weighted keyboard with aftertouch, and USB. **WHO** Those who want the Mopho sound in a road-ready package with a larger keyboard. **$949 street | davesmithinstruments.com**

SONNOX CODEC TOOLBOX

WHAT Plug-in that lets you audition a variety of data compression algorithms in real time, so you can hear how they'll affect your mix. Includes metadata editor and batch processor. **WHO** Recording engineers, as well as musicians who mix and master their own music. **$55 | sonnox.com**

RADIAL USB PRO

WHAT D-to-A converter meets direct box. USB input from your computer goes in one end; analog audio from stereo XLR jacks comes out the other. **WHO** Live musicians who use soft synths or backing tracks and want better audio than their laptop's headphone output, but without carrying a larger audio interface. **$220 | radialeng.com**

SOURCE AUDIO HOTHAND USB

WHAT Wireless ring with internal accelerometer that lets you control MIDI parameters with a wave of your hand. **WHO** Keyboardists who want to add expressiveness while keeping all ten fingers free to play. **$119 street | sourceaudio.net**

YAMAHA TYROS5

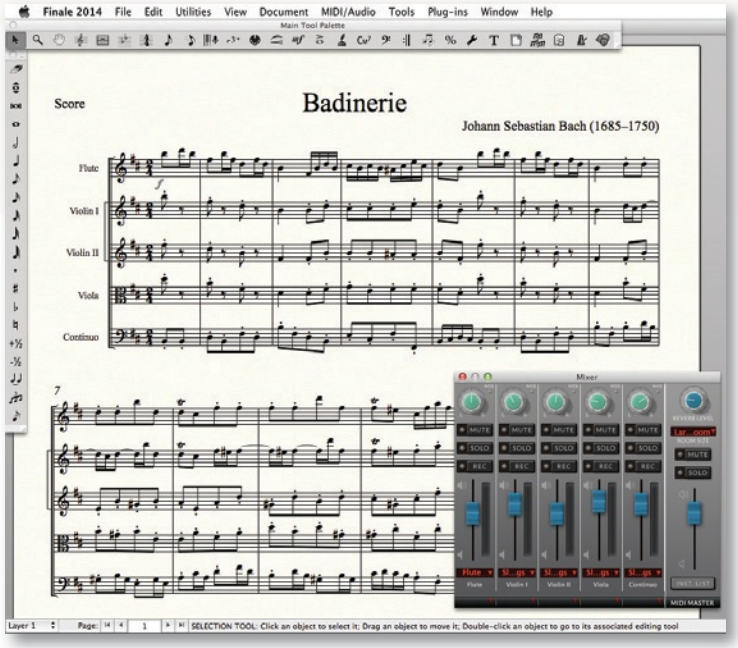
WHAT Major update to Yamaha's flagship arranger workstation. Adds intelligent voicing for orchestral sounds; new accompaniment styles; and new organ, piano, and analog synth sounds. **WHO** Gigging musicians who demand the ultimate arranger keyboard. ***76 keys:* $6,799 | *61 keys:* $6,499 | yamaha.com**

IK MULTIMEDIA IRIG PRO

WHAT Ultra-compact audio/MIDI interface. XLR combo jack takes mics, guitars, or line-level inputs. Connects via USB, Apple 30-pin dock, and Apple Lightning. **WHO** The songwriter who knows that inspiration can strike anytime and anywhere. **$149 street | ikmultimedia.com**

SONY PCM-D100

WHAT Handheld that records DSD (2.8MHz), linear PCM (up to 24-bit/192kHz), and MP3 formats to built-in 32GB flash memory or SD card. Plays AAC, WMA, and FLAC files. **WHO** Anyone wanting to document gigs, rehearsals, or lessons with the widest variety of file options. **$999 | pro.sony.com**



MAKE MUSIC FINALE 2014

WHAT Full-featured notation software with updated audio engine, expanded sample library from Garritan, and a new file format that ensures backward compatibility and future-proof scoring. **WHO** Composers and performers who need engraver-quality sheet music. **$600 | $350 academic/church price | makemusic.com**

All prices are manufacturer's suggested retail (list) unless otherwise noted. Follow keyboardmag.com/news and @keyboardmag on Twitter for up-to-the-minute gear news.

PINK M

BY JENNIFER CARPENTER

Talking to Pink Martini's pianist, arranger, and bandleader ***Thomas Lauderdale*** just may convince you that he's the best friend that music will ever have.

AUTUMN DEWILDE

PINK MARTINI

UPON LISTENING TO ANY ALBUM, IT SEEMS THAT BOTH LITERALLY AND MUSICALLY, HE CAN VISIT ANY COUNTRY IN the world, make friends with its music, win people over, and make it look completely effortless. As almost a dance without steps, he brilliantly empowers all of the band members with his cushioned accompaniment, tailored musical arrangements, level-headed balance of solo and ensemble feature, and constant invitation to a diversity of musical influences.

The self-described "little orchestra" from Portland, Oregon, draws inspiration from many musical genres, including jazz, Latin, classical, cabaret, world music, and pop. As Lauderdale had originally planned to become a politician (in fact, he once worked for much-loved Portland mayor Bud Clark), he found himself unsatisfied by the humdrum music at civic and political gatherings, and was inspired to form Pink Martini in 1994 in order to create a more inclusive and pleasing soundtrack to such events. With album after album celebrating global culture, it's no surprise that Pink Martini has performed to sold-out venues worldwide, has performed with over 50 orchestras, had five gold albums in several countries, and is still going strong after 18 years. We caught up with Thomas via phone about the band's origins and ethic, bandleading from behind the piano, and their latest studio album, *Get Happy*.

On *Get Happy* and previous albums, you represent so many cultures. China Forbes sings in so many languages. How do you get the *keyboard* to "speak" these languages?
For me, all of the music is really melody driven. If the melody's fantastic, everything else is fine. It's actually almost the only criteria for anything we write or perform, and it has to be beautiful. You have those sweeping beautiful moments in modern culture, so that's it. I try to stay out of the way a lot of the time. I think a lot of pianists play very loudly and assert themselves, and I feel like I'm a really great accompanist. I listen well and I can "breathe" with whatever's going on. I feel like there's a certain amount of empathy and patience that's required, and then you just hope that you're not butchering or being offensive to the language in a way that's typically not acceptable.

Sometimes I've found myself working with mainly African music, which has a certain set of rules; although now I understand that these rules are constantly shifting. And you know the way that I was comfortable to play was a 1940s, pre-bebop style. In general, I go nuts when there's too much noodling. You know who Jo Stafford and Paul Weston are? They had alter egos. "Jonathan and Darlene Edwards" were their alter egos and they did a whole album as them. He's always just one touch sharp in everything and the band is somewhat together, but point being, there's a lot of noodling and it's hysterical.

As the bandleader and arranger, how do you balance providing structure with musical freedom in an ensemble with such diverse instrument groupings?
I don't know exactly how I do it. It's a very tricky thing. Whether or not things go well at rehearsal can depend on things like the blood sugar levels of everyone. . . .

How do you decide who's most appropriate to take a solo on a certain song and as a ringmaster of sorts, how do you manage the traffic flow?
I don't know as the band members would say I manage the traffic flow very well! [*Laughs*.] I think a lot of our stuff is pretty old fashioned in its approach so there's kind of a general expectation for how things unfold. I've gotten into real trouble if I try to micromanage too much because, for one thing, I don't know what I'm talking about, and for two I feel like we've got great musicians who really know their instruments and the idea is for them to bring their very best, to do something appropriate with everybody else.

As a follow-up to that, are Pink Martini's songs and arrangements more through-composed, or are you more likely to improvise from a lead sheet?
It depends on the song. Sometimes it's been lead sheets, sometimes it's been no sheets, sometimes it's been very orchestrated and with particular arrangements.

Do you write your arrangements to fit the band, or do you choose the musicians to fit your musical arrangements?
Certain things just work out. For example, I didn't realize that Timothy [Nishimoto, percussionist and vocalist in Pink Martini] didn't really have a song that he was singing on as much on this recent album, but before I could think about that, I had decided that we wanted to do a Japanese song of the 1940s, "Zundoko-Bushi," and of course Timothy is Japanese so it was just perfect. I guess I must have been thinking about him in some way, but I hadn't really processed that; it was more just luck.

Do you ever use electronically sourced sound instead of a live instrument? For example, I think I hear sampled strings on "Je Ne T'aime Plus."
I do if the live instrument is no longer available, if it has left the building, so to speak. I really do like real sounds. As to the song you mention, there's a chance that Dave [Friedlander, recording engineer] may have done something like that because he tried to pull something on the Japanese song as well. I wouldn't put it past him, now that you ask the question. [*Laughs*.]

On tour, do you request a particular type of piano from backline, or do you simply use what the venue has?
I'll try to get a Steinway, but I've also played a lot of Yamahas lately. It really depends. I grew up playing an upright with a fourth honky-tonk pedal, so I'm not really choosy about pianos in the end.

You're known mainly as a pianist, but is there any digital or electronic instrument you find enjoyable?
Well, I think it would be really fun to record with something like the Ondes Martenot, with it's sliding ring control underneath the keyboard. It's wild. Are there any in the United States?

The French Connection keyboard by Analogue Systems has the Martenot ring. On a similar note, what are your feelings about analog versus computer-based recording?
You know, we haven't been able to record on tape recently because the tape machines have been busted, but I feel this slight artificiality [with digital recording]. I mean, the process of recording is inherently artificial in any case, but sometimes I worry that digital recording sounds too good and too clean. I kind of wish that we could just put one microphone up and make it work. On the other hand, it's interesting, all these sorts of things that make it "easier" for us to record something have made us working musicians in a way, because we actually rely on using them. We have to punch in and fix this and that, and so forth.

Do you own any synthesizers yourself?
I don't and I haven't. I like the concept of the Theremin, though.

The Theremin seems like an ideal Pink Martini instrument if you found a song that you felt it spoke to. . . .
We haven't done that yet, but it would be really amazing. I've been listening to the Theremin player Clara Rockmore playing "*Vocalise*" by Rachmaninoff, and I just love it.

What's your advice for keyboardists on accompanying vocalists? How is it different from accompanying instrumentalists?
Well you have to breathe; you have to breathe *with* them. You have to really try and get yourself on their breathing pattern. I feel like accompanying a vocalist—or accompanying in general—has to be approached so selflessly because you're just trying to make whomever you're accompanying sound that much better. One of the things I'm really happy about with the band has to do with the reason I didn't want to attempt a classical career. I felt it was pretty lonely, and in Pink Martini we get to travel with people, go out after work and drink and cause trouble, and that's kind of great. It's great having a "posse" and not being isolated, which is what I feared in the classical world.

What were you drawing on as you arranged and re-harmonized Kate and Anna McGarrigle's "Kitty Come Home"? Any classical composers in mind?
Well, I loved the original version. I may have been thinking a little of "Shepherd on the Rock" by Schubert, and I originally recorded some of those lines with a clarinet, the lines that are actually played by oboe, and mostly English horn. That was one of the inspirations, with the pianos. There are triplets and a swooping clarinet. It didn't quite swoop in the way I envisioned, so I realized it wasn't the right thing. So, I first tried the oboe and then the English horn, and felt the English horn was just extraordinary. When I first heard the song, for about five years, I literally thought it was about a lost cat. I had no idea that it was a plea to [singer-songwriter] Rufus Wainwright's mother to bring Rufus and Martha back to Canada and leave [her then husband] Loudon. So, I liked the melody and the atmosphere of it. Years later when I found out from Rufus what it was really about, it was more heartbreaking than I could believe to record it.

AUTUMN DEWILDE

Pink Martini has done many shows with symphony orchestras. What challenges and rewards does that process hold?
It's more fun. You suddenly have even more of a posse than you started out with, and typically symphony orchestras dread these kinds of shows with pop artists because they feel like they have to do all this stupid stuff—you know, with whole notes—but with Pink Martini we really worked hard to make sure that the orchestrations were fabulous and fun. Literally, if it weren't for symphony orchestras, we wouldn't have been able to start traveling the way we do. It was the only way in which we could travel in the U.S. and have a comfortable life.

In the way Pink Martini bends and blends genres, do you see any parallels to Duke Ellington?
Let's just say that I think Duke Ellington is brilliant. I would want to study with him.

What advice you would have for keyboardists who want to get outside of their comfort zone?
I would say it's definitely a good idea to take *dance* lessons, first of all. Are you talking primarily about classical pianists?

Any pianist or keyboardist, actually.
Well, people have to branch out because who knows what's going to be viable in five or ten years. I recently met [renowned concert pianist] Lang Lang and we threw a dinner party for him. He was talking with his manager about creative work on a new album where they hoped to reach the 20-something-year-olds of America, and one concern was, "Why would you wanna do that? It'll feel desperate and inauthentic and weird." And the only collaboration I could suggest that might be interesting would be Björk. But then Lang Lang pointed out that Björk didn't go over so well in mainland China because she was known to support the Dalai Lama. Point being, it's so difficult, this crossing of genres. Obviously all of us have to make a living and hopefully we won't go broke and can take care of ourselves, but I think this "marketing" thing is hideous and humiliating for everybody in the arts.

You mentioned dance lessons a minute ago. Is there something about dancing that enhances a player's musicianship?
Absolutely! I think everyone should learn how to dance. It's very helpful because you're breathing and it's much more helpful in a way than working with a metronome.

What's the particular advantage over someone who has never used their full body to interpret music but knows a lot about music theory, can play in odd time signatures, and so forth?
That has always been sort of nauseating to me. I didn't want to go to a conservatory where all we were going to talk about was that. I'd rather talk about . . . *anything* else.

On the title track, which is a medley of "Get Happy" and "Happy Days are Here Again," you go downtempo. Why that choice as opposed to the more traditional uptempo rendition of those songs?
Well, too many songs that are too chipper get really annoyingly so after a while. The other thing I realized is that we always sort of slow everything down in Pink Martini. Is that bad? Everything is just slower. The reason for that is that I feel like there's so much going on and so much is breathless and we need time to breathe. When I was in the mastering studio with [mastering engineer] Bernie Grundman the first time, you couldn't believe how many seconds of silence we wanted between songs. I just felt like there always needed to be a bunch of space so that you could recover and then move ahead, of course, before jumping right into the next one.

Many people don't know about Phyllis Diller's musical side. Could you tell us about working with her on the song "Smile"?
It was kind of an amazing thing. I love Phyllis Diller. We were playing in Los Angeles on New Years' Eve and I knew Kim Hastreiter, who's the Editor in Chief of *Paper* magazine, and she was playing glockenspiel and triangle and cymbal with us, and I begged her to take me the following New Year's to Phyllis Diller's house, which she did. Phyllis Diller, in recent years—she was 95 when she passed away—became a painter. So there were hundreds of paintings on her walls, each with a price tag, and you could take the ones you wanted and tally it up at the end of the night and write a check and away you went. So I did that and I had to buy a whole new suitcase to make off with my treasured Phyllis Diller originals.

She was also a classical pianist growing up, so I asked during the chili dinner that Phyllis made, whether she would ever give any consideration to recording a song with us. I had these albums from the 1960s that she had done that were sort of wild and weird, some were between comedy and not comedy, but obviously she's a musician and understands music, so I thought it'd be great to ask her to record something. And then I realized the following day that the song it should be was "Smile" by Charlie Chaplin, who was a friend of hers. A couple of months later, I flew down to Los Angeles to do an impromptu recording in her living room. She recorded it top to bottom and that was it! It was amazing. And I bought some more paintings.

Who would you like to collaborate with musically that you have not yet?

Doris Day, Dick Van Dyke, Fairuz from Lebanon, Della Reese, Little Richard, and Vera Lynn.

Who are you listening to right now that you think might would be a surprise to your fans?
I've been listening to really weird things lately. "I Wish I Never Saw The Sunshine" by the Ronettes. "Tell Him"—you know that song? "Casta Diva" sung by Maria Callas.

If you had two or three songs to listen to if marooned on a desert island, what would they be?
The Rachmaninoff Piano Concertos number 2 and 3 are fantastic. I like "The Girl from Ipanema." Tammy Wynette does a really amazing version of "Just a Closer Walk with Thee."

Pink Martini has become a very successful brand. Your fans are hugely devoted. You sell out venues all over the world. To what do you attribute that?
Melodies. It's beautiful melodies. And we're not cursing. It's hopeful. It's also desolate. It's a place where people who aren't getting along can actually find a way to get along for an amount of time, maybe. The goal originally with the band was to create this sort of music that grandparents and

AUTUMN DEWILDE

grandchildren and liberals and not-so-liberals could all kind of come together and listen to. It's driven by these beautiful soaring melodies that sort of have the style of the 1940s Hollywood glamour film but are also global and therefore worldly. I feel it's different from most things that are happening and that we're going in the opposite direction of everybody else. We're able to make a living, which is great. I love the band and I'm very happy, most days. There are some days that I'm not happy but generally I realize how lucky I am. Honestly, though, if I really stopped to think about any of this stuff, probably none of it would've happened. It would've been too scary or too daunting or too much.

Perhaps the lesson to aspiring artists is: Don't overthink?
Overthinking is terrible and it really gets everybody in trouble, especially now, because there's so much *positioning*. Again, one of the words I don't like at all is "marketing." It just makes me cringe, it makes me crazy. I feel like if things don't come from the right place, it's not going to work out. So respond to what's in front of you, do things to the point, and try not to anticipate too much.

CREATE. CONTROL. LAUNCH.

MAKE MUSIC ANYWHERE

25 key mini keyboard, 16 velocity sensitive, three-color Launch pads, eight knobs, seven function buttons and two additional performance buttons: it's everything you need to control your creations anywhere.

Fully powered by iPad or PC/Mac, ultra lightweight, sturdy, and easy to carry: make your music wherever inspiration strikes with the included Launchpad and Launchkey apps for iPad and Ableton Live Lite on PC/Mac.

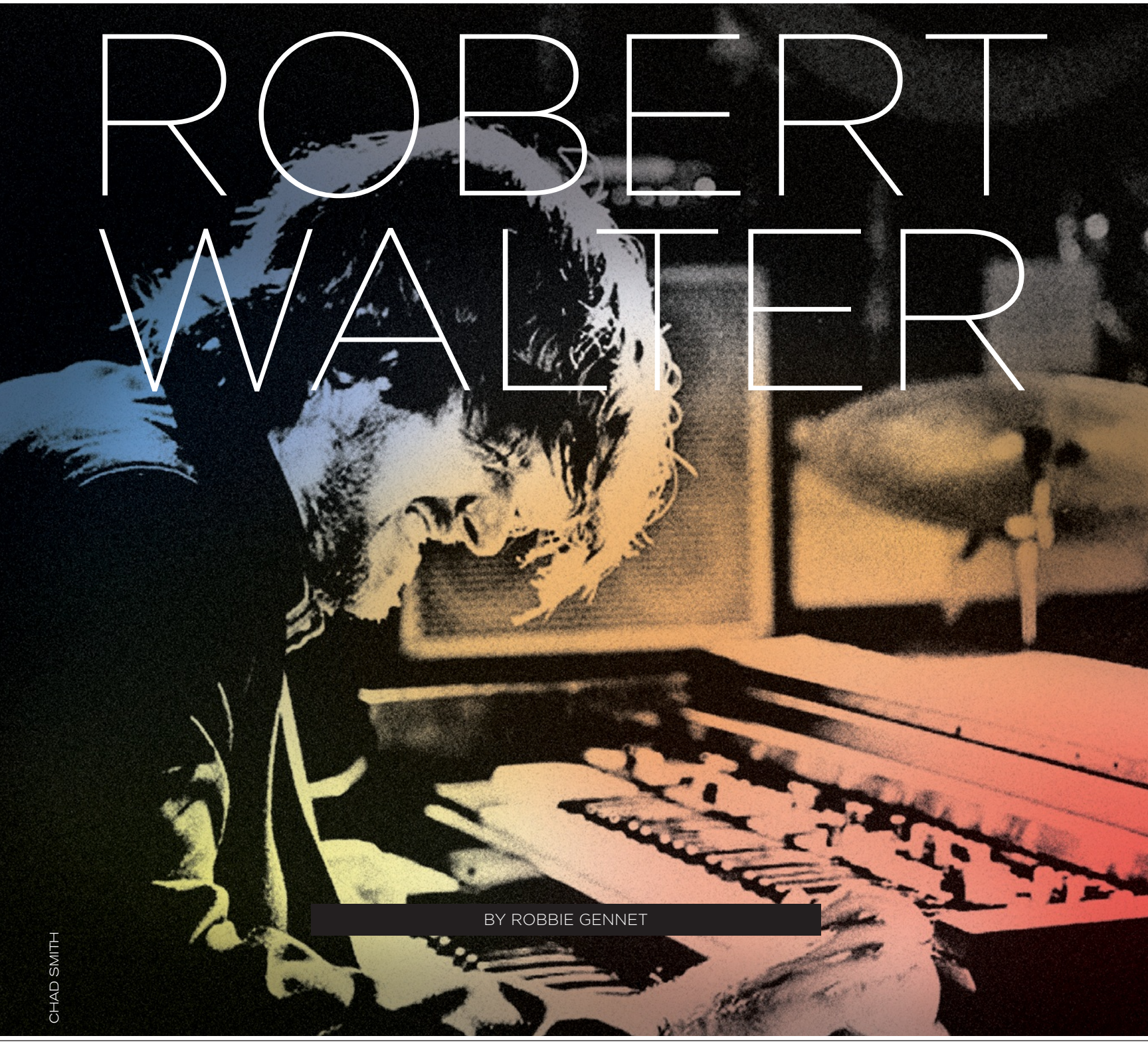
PART OF THE **LAUNCH** FAMILY

LAUNCHKEY MINI

www.novationmusic.com/launchkeymini

novation®

ROBERT WALTER



CHAD SMITH

BY ROBBIE GENNET

IF YOU'RE UNFAMILIAR WITH THE FUNKY KEYBOARD WORK OF ROBERT WALTER, IT'S HIGH TIME YOU TOOK A LISTEN. Since his debut solo album *Spirit of '70* in 1996, Walter has established his own mojo outside of the Greyboy Allstars, the still-vital band that birthed his career two decades ago. Whether playing with Greyboy, laying down New Orleans B-3 funk with Stanton Moore, or leading his own band the 20th Congress, Walter's style has always gotten listeners on the dance floor. His latest album *Get Thy Bearings* marks a superb next chapter in a career built on vintage keyboards and funky grooves.

How did you find your way into funk?
I grew up listening to hip-hop. When I was a kid it was what was new and exciting. Then I started becoming interested in what breaks they were sampling and a lot of them were from these jazz-funk records. I started buying those records and getting into the music but I came at it from a different perspective.

Who are your main influences?
The big ones for me are Herbie Hancock and Jimmy Smith—Herbie for the electric piano and Jimmy for the organ. Then all the New Orleans guys, especially James Booker and Doctor John. I also love this Bobby Hutcherson record called *San Francisco* that Joe Sample plays on. That's where I got into Joe, though I listened to a lot of the pre-fusion Jazz Crusaders as well.

How did you choose the Rhodes as one of your main sounds?
There's a little nostalgia factor. It reminds me of when I was a kid listening to FM radio and Steely Dan with my parents. A Rhodes automatically has a '70s connotation, but that's partly what I like about it. Especially when I first started playing it; everyone was either playing digital keyboards or, on the jazz side, everyone was really into acoustic instruments. That was in the days of strict jazz snobbery. There are certain kinds of harmonic possibilities from the tone of the Rhodes that sound different than acoustic piano. It's got a lot of possibilities that are outside of all the obvious references to '70s music.

How do you choose between Rhodes and Wurly when recording?
They all have their own character. Different songs require different things. To me, the Rhodes is the big, buttery, soft one, then the Wurlitzer has a little more attack and gets more barky. I also love the Hohner Pianet, which is more "narrow." The Pianet is thinner; it's great if you have a lot of guitars on a track and you want to cut through. I always associate Pianet with the Zombies, who I love. Also Sly Stone. It's all over his stuff and I love the sound.

Do you ever use digital keyboards or soft synths?
There was a period where I was a real purist about it and really kind of fetishistic about old gear. It's cool; you get one and it's interesting, you wonder who owned it and what story it has to tell. I'm not opposed to anything that sounds cool. I do have a laptop and I use software. There are a lot of things I like about working in a digital environment, as far as being able to throw a lot of stuff up and then go back and edit it. I like to write that way. I use Logic to write and demo music in that fashion. As far as performing, I've always felt like I can't get the same amount of expressiveness out of digital. And partly, digital stuff is just not chaotic enough for me. I like the "X-factor" that the keyboard might not do what you want it to do. I like all those little quirks. Digital synthesis sounds great but it doesn't hold much *mystery* for me when I'm doing it. The *process* is important to me.

How do your roots guide your musical direction?
The thing that we [Greyboy] liked the most were the Blue Note and Prestige labels, and then the organ records from about 1967 through '72. Initially, we weren't that into later jazz funk and fusion. The chords were too complex. When I was first learning how to play Herbie and Jimmy, that music was so intimidating because it's so good and complicated. They were great technicians, but there was something about players like John Patton or Leon Spencer, guys who were less virtuosic. Also, Ramsey Lewis on piano. He was a big one because I heard those records and thought, "*I* could figure out how to do that." Now I'm less scared of virtuoso players. I can get more out of them because now I can hear what they're doing. When I was younger it just kind of blew my mind.

TO CONNECT THE MUSIC WITH THE BODY AND NOT JUST THE BRAIN IS WHAT JAZZ REALLY *IS*.

Do you feel there's still a place in the world for "vintage" music?
I think there is. I don't know about the record label business. It used to be your record was a big deal and everything was based on that. Now it's touring. Luckily my forté has always been performing. I feel like it's still compelling to see that kind of music live and watch everybody improvising and interacting on-stage. There's a lot of risk involved so it's exciting and different every night. The whole jazz world has that risk in improvising, but the music has become so academic. I'm prone to love it and I have a big collection of jazz records, but I go to shows and sometimes I'm bored to tears. There's no attempt to make it *fun* for the audience. Our music works on a couple of levels: You can just zone out and get into the funky beat, but it also has some content if you care to listen deeper.

It seems like there was so much important music in the 20th century. Do you feel there's less innovation now?
People are still doing interesting things. I think for what you'd call straight-up jazz, it has a certain suspiciousness of commercialism about its culture. Like, "This is high art, we're not being commercial!" It's good to be excessive and not worry about the marketplace, but then you risk losing your connection with the audience. It eventually becomes so insular and self-referential that it's not really cool. To connect the music with the body and not just the brain is very important. It's more consistent with what jazz really *is*, in my opinion. It's the soundtrack to your life. You have to make it your own language, not just relevant to the history.

So is the value in music's populism or its personal connection? Crowd-pleasing versus *fan*-pleasing?
It's all valuable. I listen to some super "out" stuff as an influence. But Saturday night when you have your friends over, are you going to put it on for your party? Probably not. That's important to me, too: remembering that this music has a social function. It's not hung in a gallery. I'm interested in music bringing people together.

Who do you connect with in today's keyboard scene?
Doctor Lonnie Smith never disappoints. I really look up to him. His music always grooves and it's different every time. He's one of the last examples where you can see that approach to playing live, and it does what I remember those early records doing to me. For people closer to my age, I love Marco Benevento. He's got such a joy when he plays and he's a goofball, but it's very infectious. Marco has a kind of pop thing naturally. I would guess he likes a lot of classic songwriting and rock music. He has a way of improvising where there's a melodic balance of surprise and familiarity, where the surprise has impact. Brian Haas I love too, especially for his physicality. It's very visceral. That's what I always liked about Cecil Taylor. He's not melodic in the traditional sense but his playing has such a forward motion physically. I also love Neal Evans from Soulive, especially for his bass lines. And I love watching Ivan Neville play.

Do you find it harder to create a voice or style on acoustic piano versus electric pianos or organs?
Keyboards are always a workaround. On a guitar, you can bend notes and get overtones. A sax is pretty "vocal" naturally. The piano is set up in a very rigid way. All the American styles are trying to subvert that, trying to smear the notes and get screams and barks and things out of it. The organ more naturally does some of these things that I love. With piano, you're very naked. But I like the challenge of trying to strangle some emotion out of an instrument like that. ♫

Leo Genovese

KEYS FOR ESPERANZA SPALDING

BY JON REGEN

ARGENTINE KEYBOARDIST AND COMPOSER LEO GENOVESE HAS BEEN MAKING a masterful musical impact since joining Grammy-winning bassist and vocalist Esperanza Spalding's band in 2005. His latest album *Seeds* (Montuno/Palmetto) is out now, and we're happy to catch up with him for our new feature, "Talent Scout," in which we profile up-and-coming musicians you need to know about. Visit him online at facebook.com/leogenovese.

AGE: 34.

HOMETOWN: Venado Tuerto, Argentina. "That name literally means 'one-eyed deer'," says Genovese.

TRAINING: "I took piano lessons when I was younger. In the beginning it consisted of getting together with a great piano player from my hometown and having him show me things. I went to Berklee College of Music in 2001 and studied with Danilo Perez, Hal Crook and others."

MUSICAL BEGINNINGS: "I worked on a farm until I was 15. Then I put a rock band together with guys from my town. I used a Casio keyboard and we played mostly Argentine rock (including the music of Luis Alberto Spinetta) and our own originals. After high school I went to university and took classical piano lessons. I also started taking jazz harmony. My first taste of jazz was the electric side of players: Chick Corea's Elektric Band, Herbie Hancock on *Mr. Hands*, and George Duke's *A Brazilian Love Affair*. I think that side of jazz was easier for me to digest at first.

INFLUENCES: "In addition to those mentioned above, I'm influenced by players like Masabumi Kikuchi, Jaki Byard, and James P. Johnson."

WHAT I'M LISTENING TO RIGHT NOW: "I really like what Craig Taborn, Jason Moran, and Fred Hersch are doing lately."

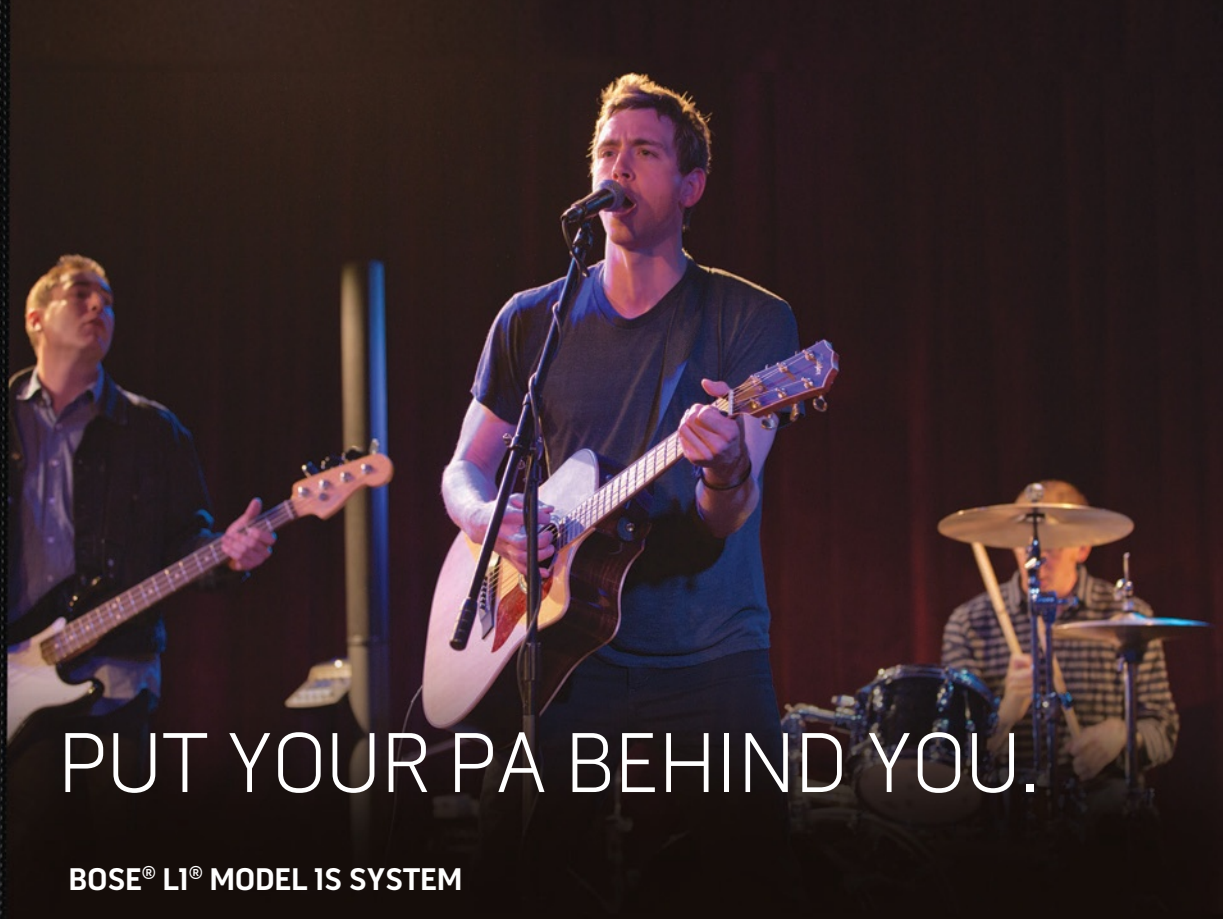
BIG BREAK: "Joining Esperanza Spalding's band in 2005. We met when we were both at Berklee and I've missed maybe one gig since joining her band. I'm very committed to it."

LATEST ALBUM: "*Seeds* featuring, Dan Blake and George Garzone on saxophones, John Lockwood on Bass, Esperanza Spalding on bass and vocals, and Bob Gullotti and Francisco Mela on drums.

FAVORITE GEAR: "The ideal situation for me is to play a Farfisa Fast 4 combo organ, a Sequential Circuits Six Track, a Hammond SK1, a Fender Rhodes, and a Fazioli grand piano. I'm also really digging the Hammond-Suzuki Melodion 44. It has a great microphone built into it."

WHAT'S NEXT: "I'm going on tour with my own trio to Argentina with Francisco Mela and Demian Cabaud. I made my first album *Haikus II* with that trio on the Fresh Sound New Talent label."

ADVICE: "Think about the future as much as the past—not only in terms of music, but in terms of building a community of individuals. Stay open and listen to as much music as possible from everywhere. Music is more proof that we're all connected."

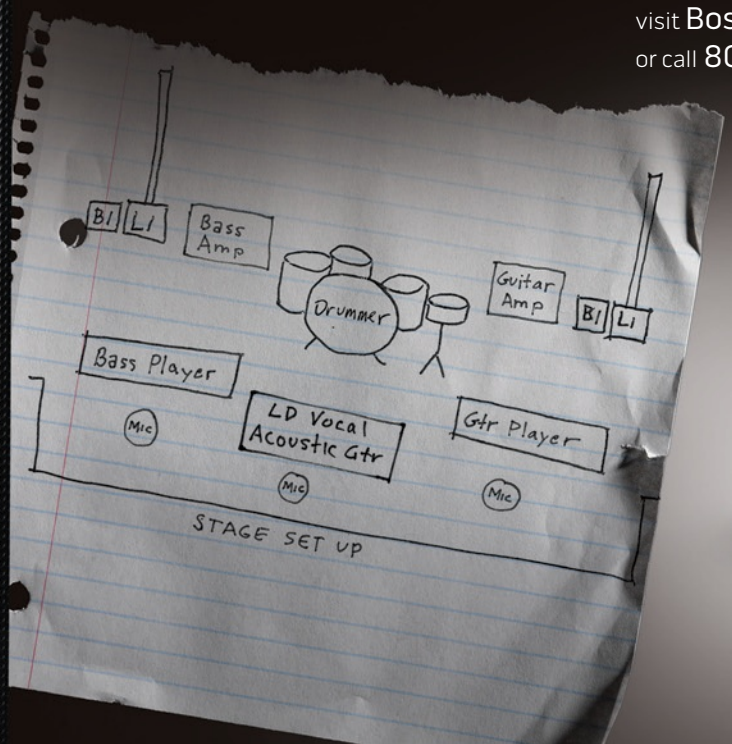


PUT YOUR PA BEHIND YOU.

BOSE® L1® MODEL 1S SYSTEM

Our L1 Model 1S is the latest addition to the L1 family, combining PA and monitors into a **single portable system.** With as few as two systems behind the band, you'll fill the room with clear, even sound and control the mix on stage and in the audience area. And, the proprietary 12-speaker Bose articulated line array provides **180 degrees of clear, even sound,** allowing you to hear what the audience hears. Plus, with no speaker stands and fewer connections, you'll spend **less time setting up** and tearing down — and more time playing a great show.

To learn more about Bose L1 systems,
visit Bose.com/L1systems4a
or call 800-486-1869



L1 Model 1S
with B1 bass

©2013 Bose Corporation
012499

VIENNA SYMPHONIC LIBRARY

Infinite

There are no limits to imagination and creativity. As Vienna Symphonic Library pushes forward with new pioneering libraries and innovative software tools, we continue to be enthralled by our users—musicians, composers and producers—who are breaking new ground with music that exceeds our imagination.

VIENNA INSTRUMENTS COLLECTIONS

STRINGS
- SOLO STRINGS I & II
- CHAMBER STRINGS I & II
- ORCHESTRAL STRINGS I & II
- APPASSIONATA STRINGS I & II
- VIENNA DIMENSION STRINGS
- HARPS

WOODWINDS
- WOODWINDS I & II
- SPECIAL WOODWINDS
- SAXOPHONES
- RECORDERS

BRASS
- BRASS I & II
- SPECIAL BRASS
- VIENNA DIMENSION BRASS

PERCUSSION
- PERCUSSION ELEMENTS

KEYBOARDS
- VIENNA IMPERIAL
- BÖSENDORFER IMPERIAL
- VIENNA KONZERTHAUS ORGAN
- SPECIAL KEYBOARDS

VOICES
- VIENNA CHOIR

VIENNA SPECIAL EDITIONS

COMPLETE ORCHESTRA PACKAGES AT ENTRY-LEVEL PRICES

- SPECIAL EDITION VOLUME 1
- SPECIAL EDITION VOLUME 1 PLUS
- SPECIAL EDITION VOLUME 2
- SPECIAL EDITION VOLUME 2 PLUS
- SPECIAL EDITION VOLUME 3
- SPECIAL EDITION VOLUME 4

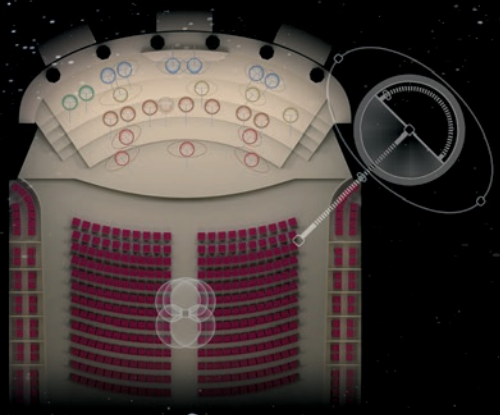
VIENNA SYMPHONIC LIBRARY
www.vsl.co.at

vienna instruments PRO

SAMPLE PLAYER WITH HUMAN PERFORMANCE CONTROL

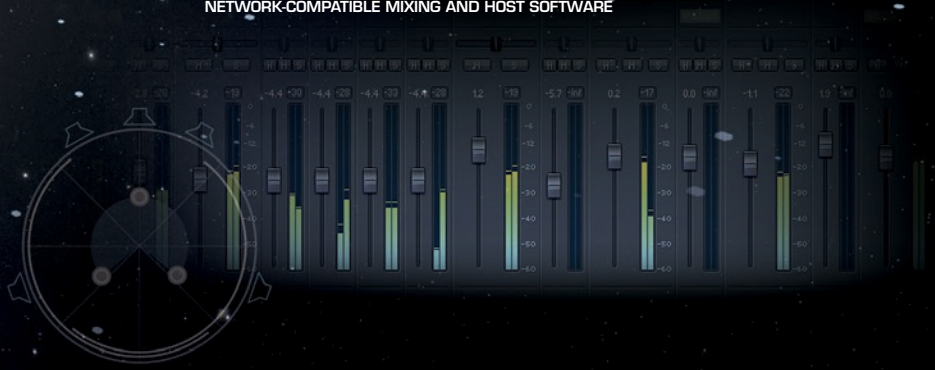
vienna MIR PRO

MULTI IMPULSE RESPONSE MIXING & REVERBERATION



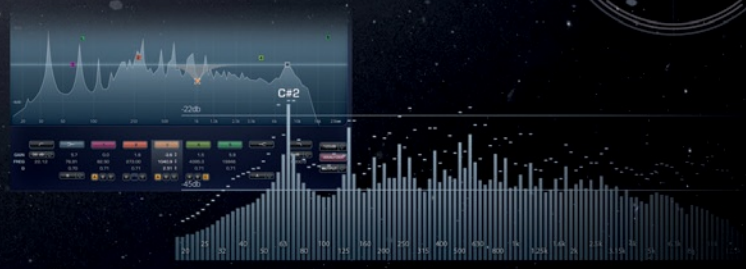
vienna ensemble PRO

NETWORK-COMPATIBLE MIXING AND HOST SOFTWARE



vienna suite

64-BIT HIGH PRECISION AUDIO PLUG-INS



HOLIDAY OFFERS

Free Single Instruments & Collections

through January 15, 2014

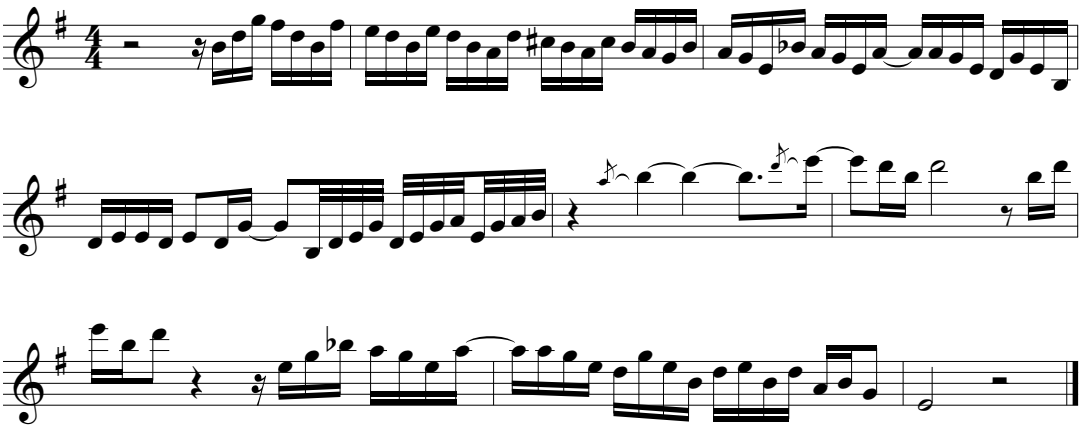
ILIO

www.ilio.com

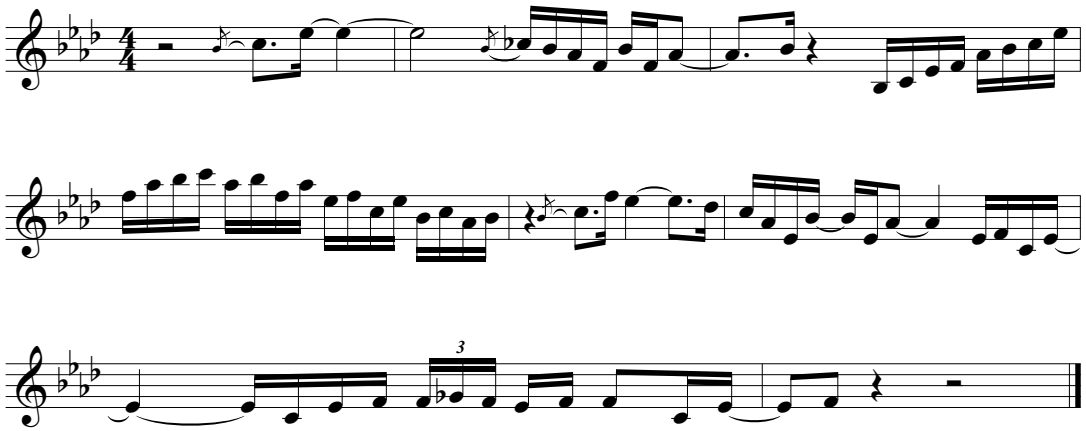
Synth Solo Ideas

BY JEFF LORBER

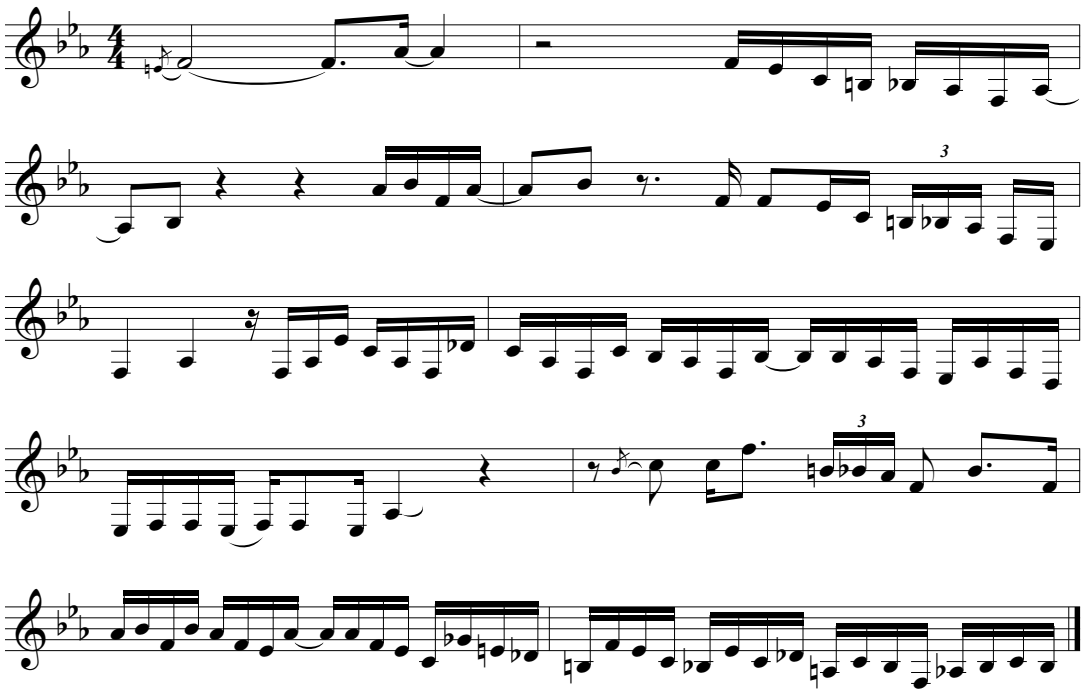
WHEN I WAS PLAYING THE CLUB CIRCUIT IN BOSTON AND NEW ENGLAND IN 1972, I THOUGHT I HAD A PRETTY GREAT keyboard rig: a Rhodes Stage electric piano, a Fender Twin Reverb amp, and a wah pedal. Then I stopped by Bunratty's Bar and saw a band that had a brand new Minimoog. It was love at first sight, and I had to get my hands on one. I was mesmerized by how it lets a keyboard player bend notes and be expressive the way a guitarist or horn player can be. I've been a big Minimoog proponent ever since. Here are some tips for building your own expressive jazz-rock synth solos.

Ex. 1.

1. Guitar-Like Leads

Ex. 1 was built using a stock Yamaha Motif patch called "Latin Lover," which I assume refers to a Carlos Santana-style lead sound. This kind of sound also works well as a synth lead. I set the pitch bend wheel to a whole-step, which lets people know it's a synth and not a guitar being played. The solo starts out with a diatonic pattern that descends down the *E* Dorian scale and then throws in a little blues line in bar 2.

Ex. 2.

2. Major Surprise

Ex. 2 is something you don't hear that much about, which is jamming on a major chord. There are a few different Weather Report songs where Joe Zawinul does some wonderful soloing in a major mode, such as "Birdland," "Black Market," and "Man in the Green Shirt." Zawinul should be studied not only for his cool soloing and lead sounds but also for his incredible synth orchestrations. Not using *ii-V* patterns as much when soloing forces you to make more out of your phrasing, with starts, stops and the forming of little motifs and variations within the major tonality to make a solo interesting.

Ex. 3.

3. Minor Jams

In **Ex. 3** I'm jamming on a house groove in *F* minor. This sound is comprised of a Minimoog MIDI'ed to the Yamaha Motif guitar sound mentioned above. The solo starts out with some bluesy licks with pitch bends to accentuate the blues element and then moves into some more diatonic scalar patterns. The next section moves up to a higher range and then introduces chromatic variations in the patterns.

Getting That Sound

Over the years, I've tried lots of options to create interesting lead synth sounds. Back in the day, I'd fatten up the sound by MIDI'ing keyboards together and before MIDI, I used control voltages and gates to combine sounds. One sound that I used quite a bit in the 1980s involved controlling my Moog 15 modular synth with a Moog Liberation that would also send control voltage and gate to a Minimoog. The main sound was the modular synth and I'd add a higher octave on the Minimoog with a quick decay to give the attack of each note a little spike. These days I take the easy way out: a straight Minimoog run through Waves' GTR amp modeling software. Pictured is a combination of preamp, chorus, delay and panning that adds a lot of stereo fatness.

Jeff Lorber demonstrates his guitar-meets-synth lead sound.

Jeff plays extended audio examples from this lesson.

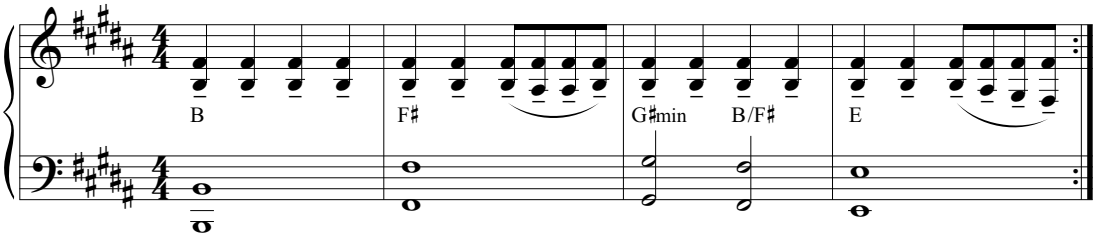
keyboardmag.com/january2014

Session Keyboardist Cheat Sheet

BY JEFF BABKO

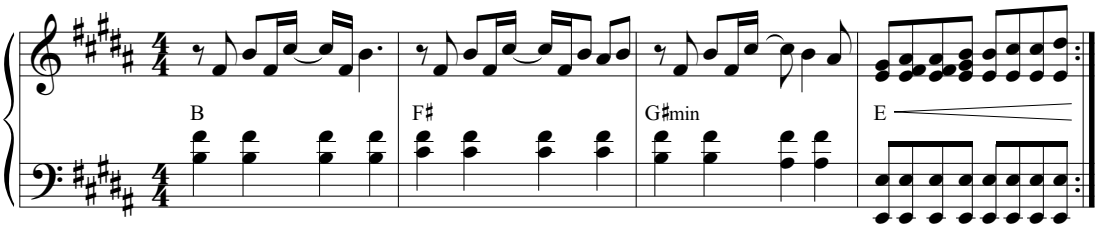
GROWING UP IN SOUTHERN CALIFORNIA, I WAS ACUTELY AWARE OF ITS SESSION SCENE, WITH GUYS LIKE DAVID PAICH, Steve Porcaro, Greg Phillinganes, Victor Feldman, and other heavy hitters covering every conceivable keyboard gig. It's tough to encapsulate what makes a successful session in just a few quick examples because being a "supportive player" truly depends on your surroundings and how you artfully react to the artist, the melody, the lyrics, and the other musicians. Here are some tips and tricks I employ on a regular basis that I hope help you on your next session.

Ex. 1.



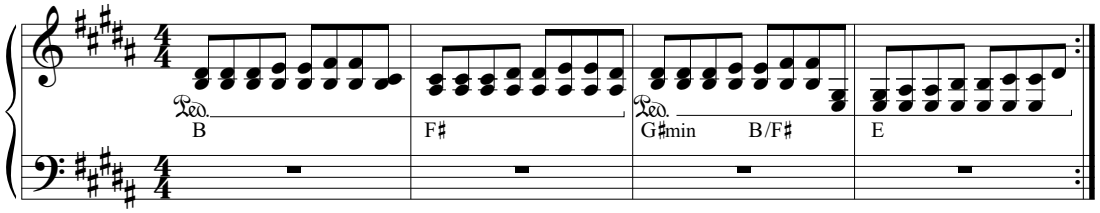
1. The "Jonathan Cain"

Ex. 1 references Cain's brilliant piano part on Journey's "Don't Stop Believin'," which redefined pop piano. The pulsing quarter-note "open *B5*" motif is the constant here. You probably notice that the "*B* fifth" continues through bar 2 over the *F#* chord. *B* shouldn't work in an *F#* chord, but here it provides a nice consistency, and that open fifth doesn't usually clash in pop music. (We do hint at the *A#* in the latter half of the bar.) The eighth-notes in bars 2 and 4 provide motion. With this open fifth pulsing being so simple, there are many ways the player can subtly provide basic motion that don't get in the way but still sounds interesting. You could request a nice quarter-note delay in the DAW, or otherwise treat it like a guitar player might treat her sonic options.

Ex. 2.

2. The Hook

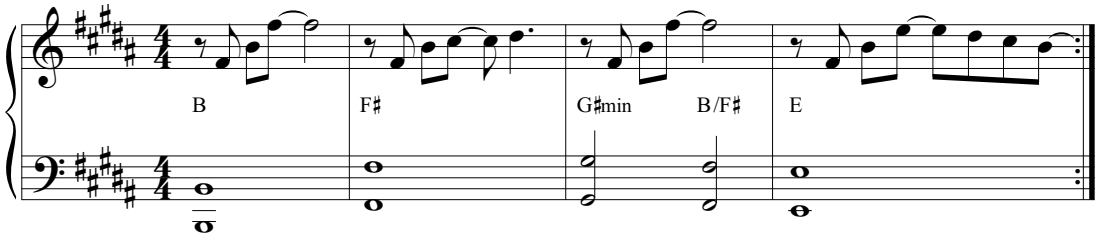
Sometimes an artist or producer will want to hear some sort of "hook" from the keyboard department; something "catchy" that adds to a simple chord progression. You'll want to make sure it neither clashes with the guitar part (or anyone else's) nor steps on the melody. In **Ex. 2** the hook is repeated with variations through bars 1-3, with a change on bar 4 to build the end of the phrase. I chose notes for the hook motif that are as neutral as possible while navigating through all the chords in the progression. I think of this as finding the "lowest common denominator:" Find whatever notes work through the whole chunk of music and milk 'em! In pop music, simpler is usually better.

Ex. 3.

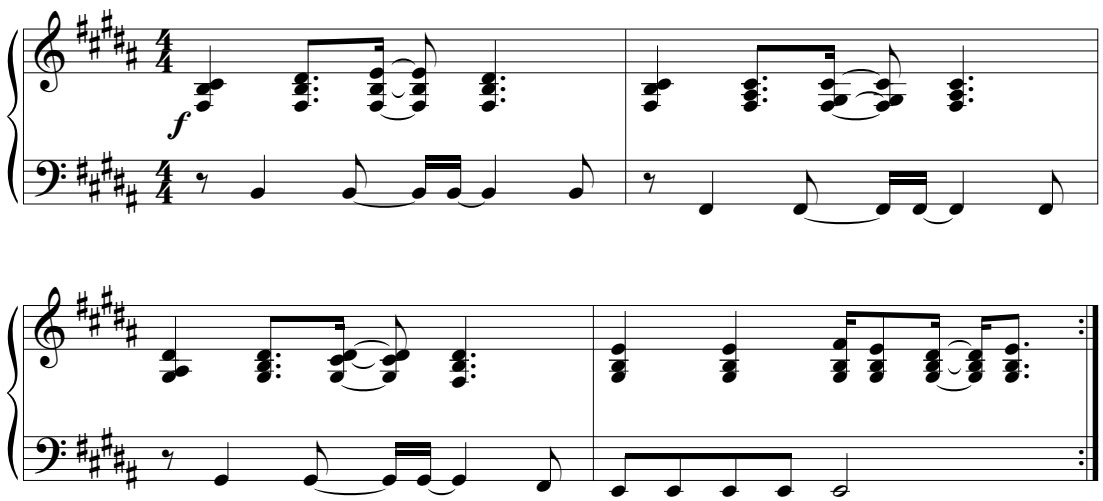


3. The Driving Pulse

Ex. 3 is a driving eighth-note idea that gives the chorus a pulse and a sense of forward motion. Many variations are possible. Remember to stay neutral, find your "lowest common denominator" notes, and drive through the progression under (but not against) the melody.

Ex. 4.

4. Drop the One

In **Ex. 4** we're just leaving out beat 1. Again, we employ a simple motif where the rhythm repeats, but the notes and inversions vary a bit.

Ex. 5.

5. The "Singer-Songwriter"

Sometimes I'll ask a session's producer if I should be playing the piano as if I wrote the song. This can get murky with a band, as often singer-songwriters that write at the piano are used to playing their songs solo. This means that the piano solely provides the rhythm, bass, and basic propulsion for the music. When playing with a band, sometimes this can be too much information and clash with the bass and drums. But that "songwriter" vibe is distinct, as proven by John Lennon's "Imagine" and most of Elton John's and Billy Joel's work.

Join the Click Clique

"Locking to the click, or even laying on the back side of it, is of paramount importance when keyboard players want to make a track feel good. Keyboardists have a tendency to rush. Your ability to lock with a click immediately defines your maturity," says **Jeff Babko**, best known for his spot in the house band on *Jimmy Kimmel Live*. He has recorded with Frank Ocean, Jason Mraz, Sheryl Crow, and Alanis Morrisette. Babko's new album *Crux* is out now. Find out more at jeffbabko.com.

SOUNDCLOUD

Hear Jeff play exclusive audio examples from this lesson.

keyboardmag.com/january2014

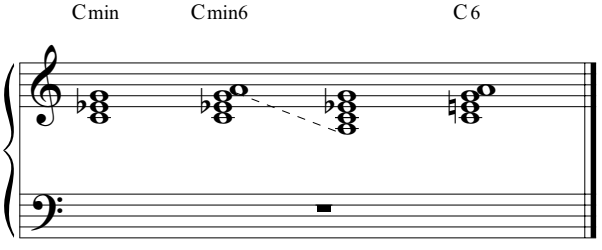
LISA TANNER PHOTOGRAPHY

One Note to Jazz

BY SCOTT HEALY

ADDED CHORD TONES OR "EXTENSIONS" ARE THE BUILDING BLOCKS OF JAZZ harmony. When you extend a basic chord structure one note at a time, hip jazz sonorities will most certainly spring forth. Let's look at how adding just one note can change the aural impact of a chord.

Ex. 1.



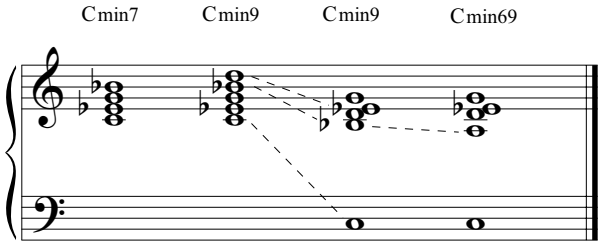
1. The Sixth

Ex. 1 starts with adding one note to a minor triad: the sixth. On top of a minor triad, the sixth is all you need to get a "film noir" type of sound. Try creating a different inversion by moving the top note down an octave. Now check out the *major* sixth. It's got a vibe all its own.

Don't Overextend

"You can start your extension explorations slowly with just a major or minor triad or a seventh chord," says **Scott Healy**, who has performed and recorded with artists like Tony Bennett, B.B. King, Bruce Springsteen, and Christina Aguilera. He is also the longtime keyboardist for TV's Conan O'Brien. Healy's album *Hudson City Suite* is out now. Find out more at bluedogmusic.com.

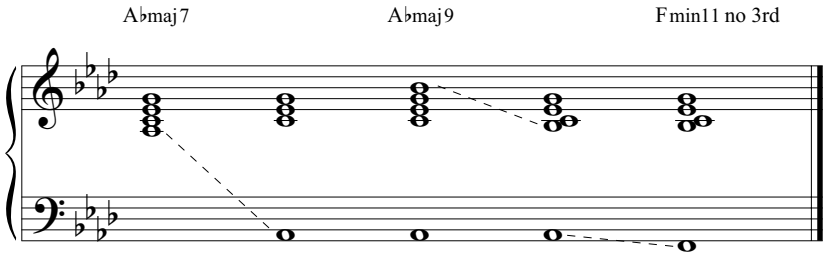
Ex. 2.



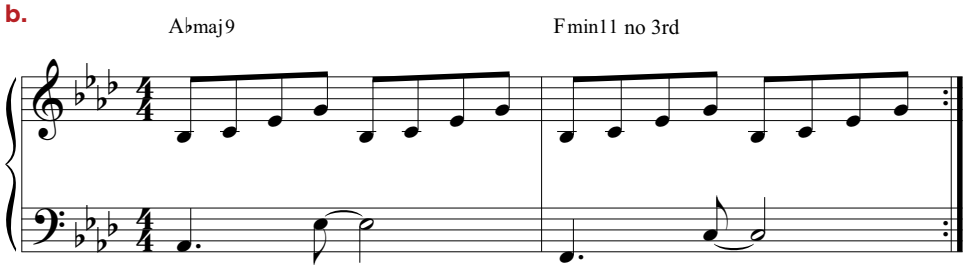
2. The Minor Ninth

Ex. 2 shows another potent chord extension. Adding a ninth on top of a minor seventh chord creates a minor ninth. Stacked thirds give this chord a calm yet dark quality. You can make your voicing more "jazzy" by moving the root down to the left hand and the top two notes down an octave. Move your thumb down to the sixth (*A*) to create the always alluring minor 6-9 chord.

Ex. 3a.



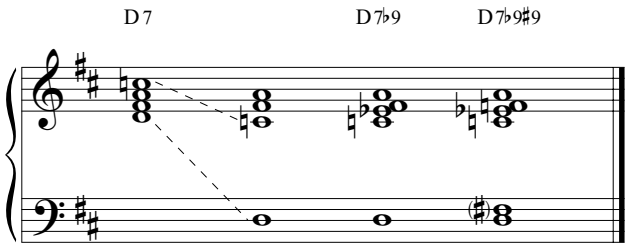
b.



3. The Major Ninth

The major seventh chord has a classic sound all its own. Stack the ninth (*Bb*) on top to create stacked thirds, then move the ninth down an octave, as seen in **Ex. 3a**. The low *Bb* and *C* give this chord its weight. If you move your left hand down to *F*, you create an *Fmin11* chord and the landscape immediately changes. Changing just one bass note, (much like adding a chord extension itself) can open up many creative possibilities. **Ex. 3b** shows an arpeggiated line using these same voicings.

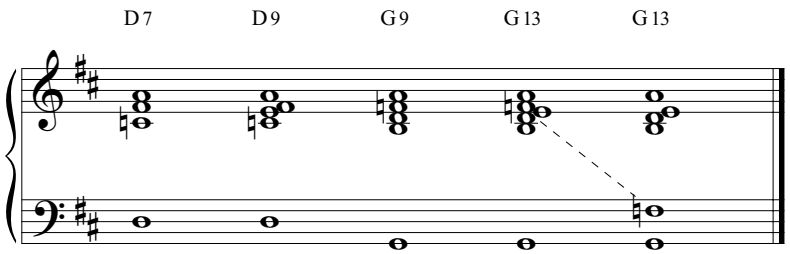
Ex. 4.



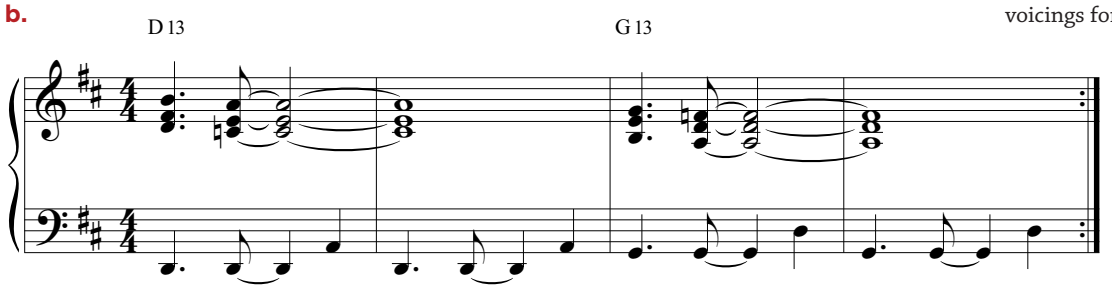
4. Flatted and Sharp Ninths

Dominant seventh chords love added notes, especially *altered* extensions like the *flatted ninth* and *sharp ninth*, seen in **Ex. 4**. Put them both in the same voicing and your chords will soar!

Ex. 5a.



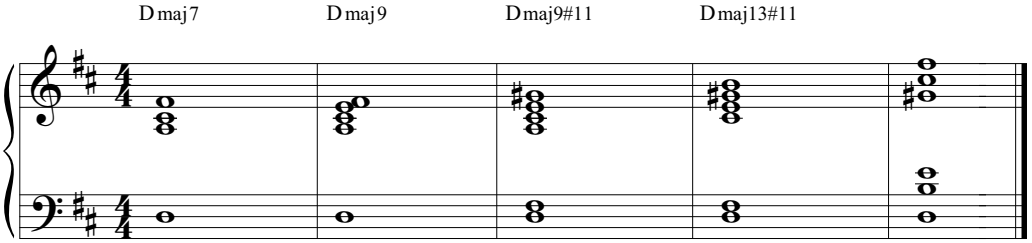
b.



5. Ninths and 13ths

Added chord tones "resolve" in various ways, often downward. In **Ex. 5**, when moving from *D9* to *G9*, the fifth becomes the ninth, and the third moves down to the seventh. If you add an *E* to the G9, you get a *G13* chord. Now move the seventh (*F*) down an octave, and you get a "meat and potatoes" jazz voicing. **Ex. 5b** uses these new extensions in a progression of *D13* and *G13*. I'm using three-note gospel voicings for a sparse, bluesy sound.

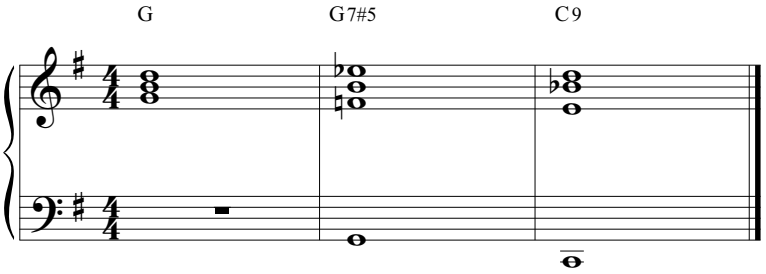
Ex. 6.



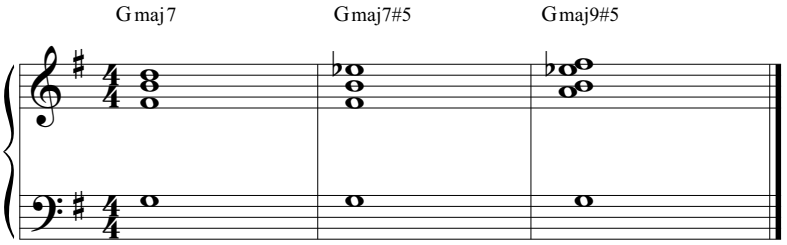
6. The Sharp 11th

In **Ex. 6** we dig even deeper. Add a ninth to a major seventh chord to get the major ninth, then add the sharp 11th (*G#*). Note how it's just another tone in a series of stacked thirds. Now add the B (the 13th) on top. Experiment with spreading out your voicing—here the fourth intervals impart a modern sound.

Ex. 7a.



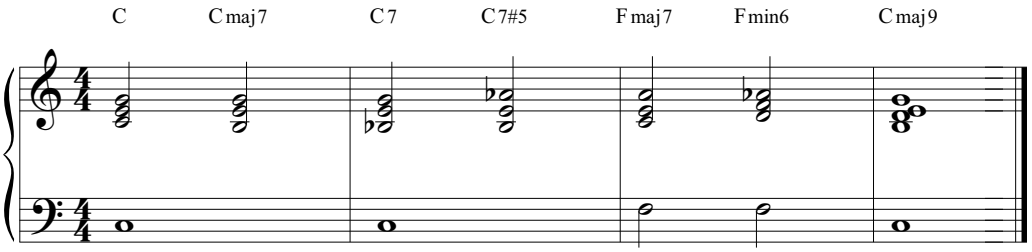
b.



7. The Sharp Five

We construct the sharp five by moving the major triad's fifth up a half-step, as in **Ex. 7a.** This creates a most unstable sounding chord. Move the root down to the seventh with your thumb and then resolve it all to a *C9* chord. **Ex. 7b** shows how there's also a place for the sharp five in major seventh and ninth chords, taking you into a spooky, dissonant space.

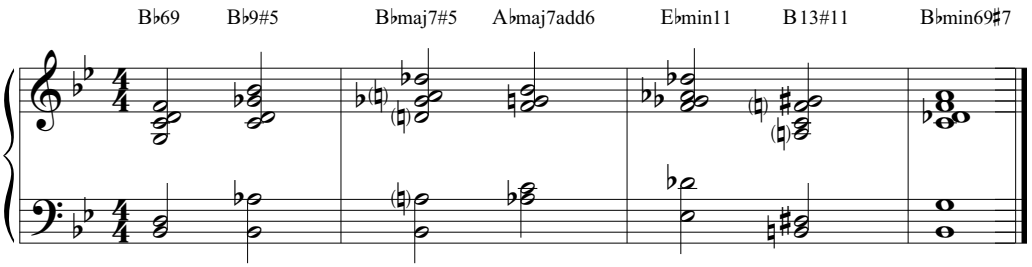
Ex. 8.



8. Extensions in Motion

The progression in **Ex. 8** moves one or two notes at a time from the *I* chord (*C*) to the *IV* chord (*F*) and back using the chromatic motion of sevenths and extensions.

Ex. 9.



9. Chord Workout

Ex. 9 is an example of dense jazz chords using extensions. You generally want to keep the chord root out of your right hand voicing and play either "roots and thirds" or "roots and sevenths" in your left hand. Here we're going for maximum chordal density, so extend and alter your chords at will!

Scott's major chord workout.

Scott plays through this column.

keyboardmag.com/january2014

CP4 STAGE

Simply the Best

The CP4 is simply the best stage piano Yamaha has ever made. The CP4 Stage features sounds from Yamaha's Premium Collection of hand crafted grand pianos including the CFX, CFIII and the S6. Vintage electric pianos complete with Virtual Circuit Modeling stomp box effects and a variety of bass, Clav, organ, strings and pad sounds from our flagship Motif round out the sound set, so you're ready for any musical situation. Our Graded Hammer Wooden Key action with Synthetic Ivory Keytops gives you the perfect piano touch and response. The CP4 Stage's slim, lightweight design (38.5 lbs.) combines portability with elegant style. Most importantly, an easy-to-understand interface with large lighted buttons for splits and layers gives you all the controls you need right at your fingertips, and the easy-to-read, ultra-bright fluorescent display makes the CP easy to use even on the darkest stage.

- 45 Premium grand pianos including the CFX, CFIII and the S6
- 47 Vintage electric pianos (tine, reed, DX and original CP80)
- 341 Voices including bass, Clavs, organs, strings and pads based on our flagship Motif
- 62 Virtual Circuit Modeling effects, reverb, chorus, master 5-band EQ and compressor
- Easy splits and layers with large lighted buttons
- 88-note graded hammer wooden key action with Synthetic Ivory Keytops
- Slim, elegant, lightweight (38.5 lbs.) design for portability
- FC3 foot pedal for half-damper and sound board resonance included

"I can't wait to get this instrument on the stage and play live. Whether it's with The Stones or if it's with my band. I just can't wait!"

— Chuck Leavell

Visit www.4wrd.it/chuckem4
or scan this QR code to see
Chuck Leavell and the CP4 Stage

YAMAHA

©2014 Yamaha Corporation of America. All rights reserved.

Take your MOTU studio right to the edge

Run your MOTU software and hardware on the new ultra thin, ultra powerful iMac, then add the very latest recording technology.

Apple iMac

The desktop. In its most advanced form ever.

Creating such a stunningly thin design took some equally stunning feats of technological innovation. Apple refined, re-imagined, or re-engineered everything about iMac from the inside out. The result is an advanced, elegant all-in-one computer that's as much a work of art as it is state of the art.

MOTU 8pre USB

16x12 USB interface and optical expander

The new 8pre USB provides eight mic inputs with pristine preamps, individual 48V phantom power and pad, and plenty of gain. Connect to any Mac or PC with USB, or to any digital mixer or other interface equipped with ADAT optical. Flexible combo jacks take mics, balanced line inputs, and even hi-Z guitar inputs.

Novation Launchkey

Next-gen USB/iOS controller

The Launchkey 49 gives you cutting-edge control over your MOTU mobile studio with 49 smooth, synth-weighted keys, and 50 physical controls including 16 velocity-sensitive multi-color trigger pads. Produce and perform music instantly with powerful integrated free Novation apps for iPad. Launchkey is Mac, PC or iPad powered and available in 25, 49 and 61 key versions.

Value Added Reseller
Professional Audio

MOTU

Focal Spirit Professional
Closed Studio Headphones

The Spirit Professional headphones benefit from Focal's years of expertise. Focal has been designing and manufacturing speaker drivers and loudspeakers since 1979. These headphones have been designed for sound engineers and musicians. The neutrality of the sound combined with the dynamics of the transducers will enable you to work with great precision. The memory foam ear cups provide excellent isolation and outstanding comfort.

Shure Beta 181 Stereo Set
Ultra-compact side-address instrument mics

Designed for discreet placement and control in live or studio environments, the Sweetwater-exclusive Beta 181 Stereo Set includes interchangeable cardioid, supercardioid, omnidirectional, and bidirectional capsules for superior versatility. The small-diaphragm design provides superior performance in tight spaces. High SPL handling, ultra-smooth frequency response, and interchangeable polar patterns make this a must-have mic bundle. Includes two mic bodies and eight capsules in a custom case.

Mackie MRmk3 Series
Powered studio monitors

Mackie MR8mk3 Powered Studio Monitors will help you make better sounding music, with innovations like an enhanced waveguide for a wider sweet spot, custom-tuned rear porting for smooth, extended bass response, and customizable frequency controls to let you dial in the perfect response for your space. Now offered as a full-range series, choose the size that's perfect for your MOTU studio and budget: from 5", 6", or 8" full-range models, as well as a brand new, hard-hitting 10" subwoofer. The MRmk3 series are Mackie's latest assault on the state of the monitoring art.

©2014 Sweetwater, Inc.

Sweetwater®
Music Instruments & Pro Audio

(800) 222-4700
www.sweetwater.com

FedEx Ground
FREE SHIPPING
NO MINIMUM PURCHASE
ON MOST ORDERS. CONTACT US FOR MORE INFO.

Fig. 1. Using the "wrong" loop settings can create metallic, robotic effects in Cakewalk Sonar.

Tips 'n' Tricks for Loops 'n' Beats

BY CRAIG ANDERTON

LOOPS AREN'T JUST FOR DJS—MORE MUSICIANS OF ALL TYPES USE LOOPS for anything from a rhythmic backbone to interesting sweetening. But if you think using loops simply means slapping them into a DAW's track or loading them into a sampler, you're not taking full advantage of what loops can do—and they can do a lot!

Choose the right loop format for the job. There are three main stretchable loop types. REX files detect the transients in a piece of audio, create "slices" at these transients, and associate each slice with a MIDI note. These MIDI notes form a sequence that plays the slices sequentially; so speeding up the sequence speeds up the rate at which the slices play back, thus increasing the tempo. The reverse happens when you slow down the sequence. REX files are ideal for percussive tracks, particularly if they aren't melodic and don't have sustained sounds (*e.g.*, cymbal crashes). Single-note lines, like bass, sometimes stretch well, too. REX files can have excellent sound quality, as slicing the audio doesn't change the fidelity, only the duration; however, slowing down can leave gaps between the slices that may or may not be problematic. Changing a REX file's pitch applies DSP; the quality of the results depends mostly on the transposition amount.

The Acidized and Apple Loops formats also detect transients but instead of slicing the audio physically, they employ DSP to lengthen these sections to slow down tempo (or shorten them to speed up). To avoid discontinuities in the transitions between sections, Acidized and Apple Loops files apply crossfading to smooth the sound. The files don't always work as well with percussive material as the REX format, but often do a superior job with sustained sounds or sounds where you need to transpose pitch.

Tools for rolling your own. Creating or editing REX files requires Propellerhead ReCycle; you can create or edit Acidized files in any version of Sony Acid or Cakewalk Sonar. To obtain a utility program for working with Apple Loops, register as an Apple developer (it's free) at https://developer.apple.com/downloads/, then search for "Apple Loops" and download the Apple Loops Utility SDK. Note that with any of these formats, creating stretchable files capable of working over a wide tempo range is a very specialized skill—so expect to do lots of trial and error. Also note that unfortunately, many loop libraries have shoddy enough editing that you may need to edit files yourself for best results.

Another option is simply to use a DAW's stretching DSP to trim an audio file to the right length, and therefore the right tempo. For example, if a file is a little too long in Cubase, you control-click on the edge of the audio file and drag until it's the proper length. However unlike

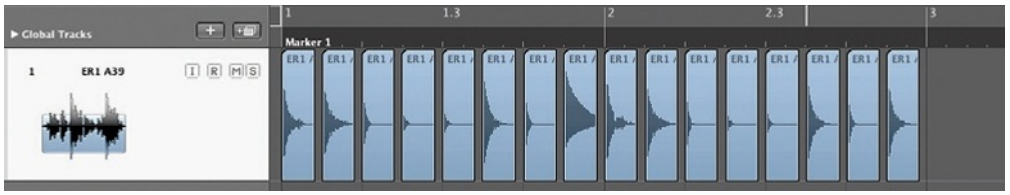


Fig. 2. A 120 bpm, two-measure loop has been sliced with Logic's tempo set to 120 bpm. Slowing the tempo down to 100 bpm spaces out the slices, but the overall duration is still two measures.

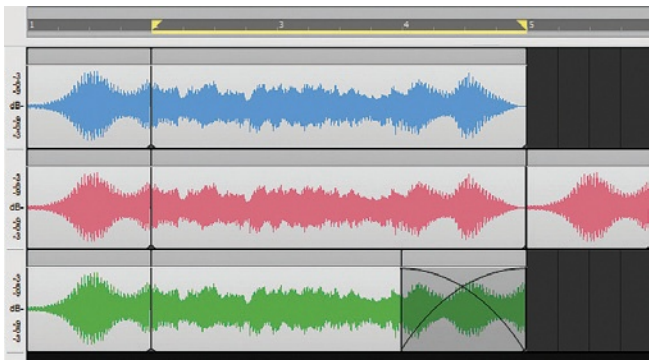


Fig. 3. The top view shows the original waveform, with a split at measure 2. The middle view shows the copied measure about to be crossfaded with the waveform's final measure, as shown in the lower view. The yellow line at the top indicates the loop points.

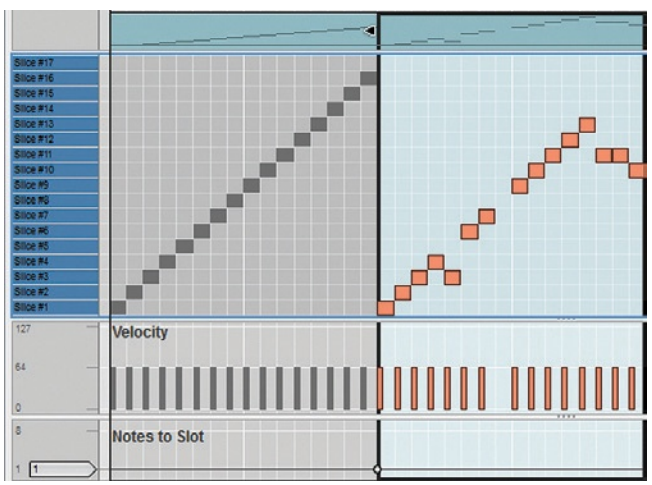


Fig. 4. Reason's Dr. OctoRex can send the MIDI notes that trigger slices to a track, making it easy to rearrange the MIDI notes and thus change the loop's arrangement. Note how the first two measures have had their notes modified in the second two measures.

stretchable file formats, files stretched via DSP will not react to tempo changes.

The magic of 100 bpm. Stretchable loop formats have a much easier time speeding up than slowing down because speeding up removes material, while slowing down has to create new material. It's often possible to speed up the tempo by 150 percent (or more) with a properly edited file, but only slow down by 10 to 20 percent. So, record files you want to loop at 100 bpm in order to slide down into the 80 bpm hip-hop range, or speed up to almost the drum-and-bass zone.

A deranged Acidized file trick. Want some robotic electro loops? In Sonar, double-click on a loop to bring up the Loop Construction window. Set the Pitch transpose parameter to +24 (but be sure to try other settings), Threshold to 100 percent, and start playing the loop (see **Figure 1**). Next, experiment with the rhythmic value in the drop-down menu to the left of the Threshold slider. Start with 32nd-notes for the most robotic/metallic effect, then try sixteenth-notes, eighths, and so on. Each slice setting produces a different type of freakazoid effect; you can further modify the sound with the Threshold slider. These bizarro loops seem most effective when layered with the original loop, which should be set to normal loop settings. They also make great breakbeats when you drop out the original loop.

Create "faux REX" files. Set your DAW to the same tempo as the audio clip you want to slice (make sure the clip sits on measure boundaries), and then slice the audio at transients. As these slices will "anchor" to specific places on the DAW's timeline, speeding up or slowing down the DAW's tempo will change the speed at which these slices play back (see **Figure 2**). However, they won't be MIDI-triggerable unless you map each slice to a sampler's key (*e.g.*, using Native Instruments Kontakt, MOTU MachFive, Reason's NN-XT, or another soft sampler).

Loop virtually any pad sound. The tools to create perfect "pad loops" exist in most DAWs. We'll assume you'll want to retain the pad's attack, having the loop occur within the pad's sustain. As pads don't have rhythmic components, it usually doesn't matter how long a section of the sustained part you loop. For this example, we'll loop the last three bars of a four-bar pad.

Record a little more than four bars of the pad, then split the file at the start of measure 2 and the start of measure 5. Delete everything after measure 5. Next, copy measure 1 and slide it over measure 4 of the pad to create a crossfade (preferably with an equal-power fade curve as in **Figure 3**). If your DAW doesn't create crossfades automatically, then add a convex fade-in to the copy of measure 1 and a convex fade-out over measure 4, then mix the measure 1 copy with measure 4.

In a DAW, you can copy/paste measures 2 through 4 to extend the loop. In a sampler, bounce what you created into a single audio file, and then import this into your sampler. Set the loop end at the end of the file, and the loop start at the precise start of measure 2 (this may require some experimentation). When you play a key, you'll hear the pad attack, then the pad's sustain will loop.

The REX jumble. One of the coolest features of REX files (and even "faux REX" files if they're triggerable via MIDI) is that you can rearrange the MIDI notes to trigger slices non-sequentially. Slices in drum loops will often isolate individual elements—kick, hi-hat, snare, and the like—and you can change these around to change a drum pattern (see **Figure 4**). ♫

SOUNDCLOUD

Download royalty-free loops! All loops are licensed to you by Craig Anderton for any use other than inclusion in a sample library.

keyboardmag.com/january2014

If you've owned a Kurzweil synth from the K2600 through the current offerings, Dave Weiser has created many of its outstanding synth, electric piano, organ, and vintage keys Programs. Visit him at weisersound.com.

THE ART OF SYNTH SOLOING

Kurzweil's Not So Secret Weapon

BY JERRY KOVARSKY

ANYONE WHO HAS PLAYED, OWNED, OR EVEN ASKED QUESTIONS ONLINE about a Kurzweil synth since the start of this century has come into contact with the deep talent and warm personality of Dave Weiser. He started creating sounds for Kurzweil 13 years ago, later adding product development and management to his responsibilities. Over the ten years I've known him, I've grown to admire his deep skills and pride in his work. Now an independent consultant who sets up live theatre shows and brokers gear, Dave was an obvious choice to invite to share some knowledge with us.

Double, Detune, and Drift

This is the most basic thing you can do with a synth to fatten things up. It's been covered here before, so I'll touch on the basics and offer one interesting twist. Detuning is nothing more than doubling a signal (say, a sawtooth wave oscillator) with one of the two signals tuned slightly up and other tuned slightly down. It's the synthesizer version of a chorus effect. Usually the amount of pitch offset is somewhere between two and ten cents up or down.

A less common trick is to emulate the slight pitch drift that occurs on classic analog synths like the Minimoog. Some synths have a dedicated parameter for this tuning imperfection—called drift, analog feel, detune, or something similar. The way Weiser likes to accomplish this is to use an LFO to slowly modulate the pitch ever so slightly on *one* oscillator of a detuned pair. Anything that introduces irregularity is going to be more pleasing to the human ear than sounds that are static. Why do this instead of using the general detuning settings? The sound gets a bit thin if the oscillator veers back to a perfect unison, so you should keep some tuning difference between the oscillators at all times.

Set Filters on Phase!

Another doubling trick is to use an allpass filter to create a phaser effect. This lets you build a simple phaser signal path using a filter rather than running a sound through an onboard effect. Dave likes to do this because it adds some simple motion without sounding as deeply "effected" as using the DSP effect. And some effects don't allow the modulation we're looking for here.

A signal going through an allpass filter retains its amplitude level, but certain frequencies will be placed out of phase. By combining the all-passed signal with the original, unaffected signal, the out-of-phase frequencies will cancel out, creating a dip or *notch* in the sound. Using an LFO to modulate the allpass filter's frequency, you can cause this notch to sweep up and down over time: the classic phase shift effect. The key here is to have a separate filter for each of the oscillators, so only one is running through the allpass filter. Some synths offer a filter topology that provides parallel filter routing so each oscillator can be routed to an individual filter; others user smaller building blocks of an oscillator, filter and amp that can be combined. Roland calls these Tones, which are combined to make up a Patch; Yamaha calls these Elements, which are combined to make up a Voice. Most samplers (and Kurzweil synths) call these Layers, which are combined to make up a Program. However your synth does it,

Fig. 1. The Ibanez TS-9 Tube Screamer is perfect for adding some serious distortion to your leads.

Fig. 2. Radial's Tonebone Plexitube is tube-driven and offers more distortion and tonal color options.

you want two oscillators programmed basically the same, slightly detuned, with one running through a standard lowpass filter, and the other going into the allpass filter (Kurzweil PC3 series workstations, Native Instruments Absynth and Massive, and Spectrasonics Omnisphere all offer one.) Some synths provide a discreet notch filter (Absynth, Omnisphere, and Applied Acoustics Ultra Analog VA-2) in which case you'll only need one layer.

You can take it one step further by assigning the LFO rate control to a physical controller such as a wheel, slider, or knob. Being able to speed up the LFO adds an unexpected "blast off to outer space" effect that can be a welcome change of pace from the standard synth-lead vibrato. Of course you can do this as a secondary control if you still want to use your "normal" vibrato, or add a little bit of this phaser LFO speed control to your modulation wheel—along *with* the vibrato—for a unique, spacey sound.

Still can't get there? Some synths can't process each oscillator individually. The classic Minimoog design is but one example where all the oscillators are fed into the same filter. What can you do? Create two copies of the same Program and layer them using a Multi or Combi mode, or use two tracks in your DAW set to the same MIDI channel. One can have the lowpass filter and be detuned flat, the other can have the allpass or notch filter and be detuned slightly sharp. This "modular" approach to building a sound from multiple synth programs may be unfamiliar and a bit unwieldy, but it will yield some amazing results.

Pedal to the Metal

Even though most of today's hardware synths have onboard effects, Dave still likes to use guitar-oriented stomp boxes when playing live. There's something visceral about being able to toggle a box dedicated to doing one thing well. Sometimes, a hardware stompbox simply has the right *sound*, especially in the area of overdrive and distortion. Many guitar, amp, and pedal companies live for getting that sound right, after all.

For distortion try the Ibanez Tube Screamer pedal (see **Figure 1**). It kills and costs relatively little. It's a great way to almost instantly get a passable lead guitar sound out of a monophonic synth patch (of course there are plenty of other distortion pedals out there that will do the trick). Add wah and analog delay pedals for additional lo-fi gratification. Want some more unique effects? Explore the world of pedals made by Electro-Harmonix, Pigtronix, Radial Engineering (**Figure 3**), and the Moogerfoogers.

Arpeggiator Soloing

This trick might be the most fun of the bunch. Set up an arpeggiator with a tempo matching the song you're playing. Set the note timing to sixteenth- or 32nd-notes and the range to two octaves, and let the sonic mayhem ensue. You won't need to play fast—hitting eighth- or even quarter-notes will make for an insane solo. Bring it in at a choice place in your solo, turning on the arpeggiator for some "you know who" fretboard hammering solo fun.

Most arpeggiators generate notes that are always above the trigger notes you actually play. Some arpeggiators have settings that allow you to choose which direction the pattern will travel from the trigger notes, either above, below, or both. Yamaha, Roland, and others offer such a choice, as do most Kurzweil workstations. Other than those, we've found the above-and-below option in Applied Acoustics Ultra Analog VA-2 and the M-Audio Venom synth.

Kurzweil calls these choices "unipolar" (one direction), "bipolar" (both up and down are possible) and "random" (self-explanatory) with the range being set with both positive and negative numbers. I like to use bipolar, meaning that the pitch will shift both up and down from the held note, with a range of plus/minus two octaves. When you hold a single note, you'll hear the initial pitch followed by notes one octave up, two octaves up, one octave up, back to the initial pitch, then one octave down, two octaves down, et cetera, in machine-gun succession. See **Figure 3** for an example of this, and listen to the online audio to hear it in action. ♫

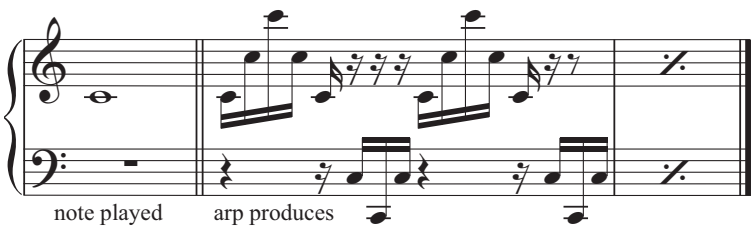
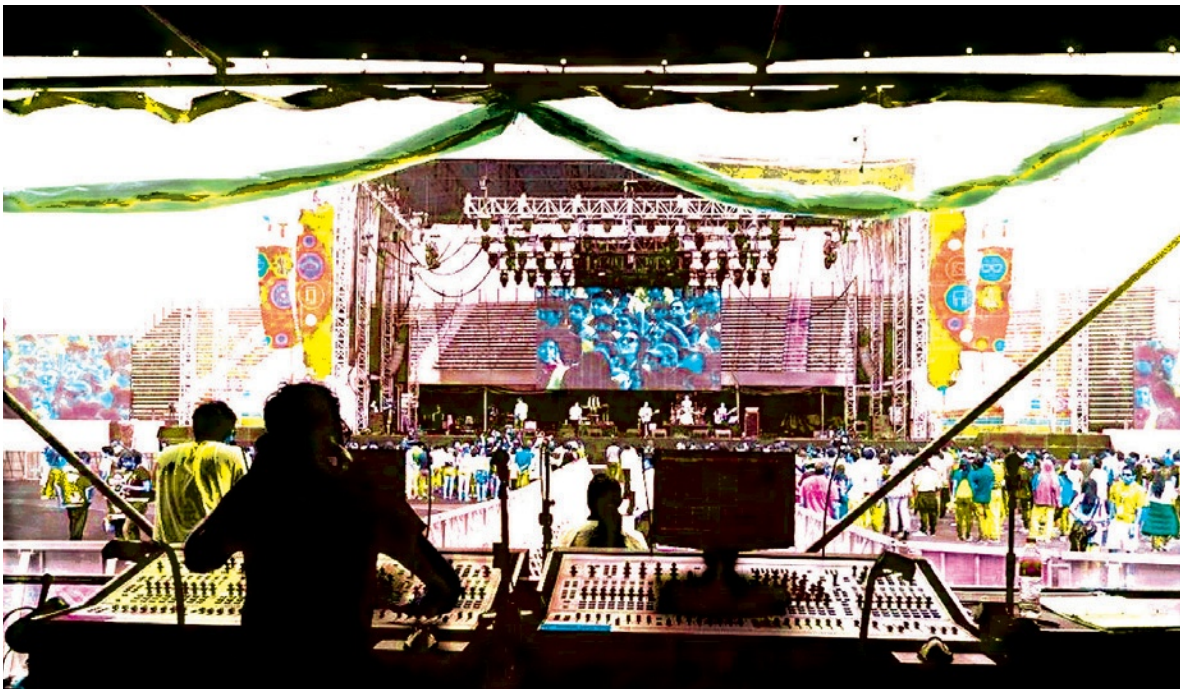


Fig. 3. The notes produced by an arpeggiator set to +/-2 octaves with a bipolar range setting.

SOUNDCLOUD

Audio examples of the techniques from this column.

keyboardmag.com/january2014



Hey Sound Guy!

HOW TO WORK WITH A GIG-SUPPLIED ENGINEER

BY KEN DE LORIA

MANY OF US WHO PLAY CLUBS, WEDDINGS, AND PRIVATE PARTIES DON'T regularly work with sound engineers. Often we set the levels ourselves on a basic house system, or bring our own P.A. and run it from stageside—with this double duty often going to (you guessed it) the keyboard player. Systems like the Line 6 StageScape have made it more practical for bands to get good sound from this approach. Some bands are also lucky enough to tour with their own engineer, or to have developed a good relationship with the sound tech at the club where they regularly play. But at an event where a sound system is provided along with one or more operators you don't usually work with, things can get worrisome. Suddenly you're turning over your band's sound to strangers.

Fear not. Unless these strangers are rank amateurs, the chances are pretty good that you'll sound substantially better than when doing sound yourself. You need to work together, though, so here are some pro tips for doing so.

The Golden Rule

With rare exceptions, sound personnel are every bit as interested in your gig sounding fantastic as you are. So the first rule is the Golden One. Don't treat them like second-class citizens. Their work can be very difficult, especially when multiple acts are present, each with a list of their particular needs. It's especially difficult in the pre-show setup phase, when five bands are all competing for face time with the engineers as the clock ticks towards the first act's downbeat.

Unless, that is, a clear sound check schedule was established in advance. Unfortunately, that's not always possible. But you can play your part by working with the people who hired you. Ask for a sound check schedule and a performance schedule in writing. If you can't get one, create it yourself and try to get it signed off by all acts who have a stake in the event.

Establish One Voice

Sound personnel need to know clearly and concisely what you need. If a well-meaning sound operator is bombarded with commands, requests, and instructions from five or six band members at once, he or she is not going to get a proper big picture. Plus, in many cases the requests may conflict. *Lead singer*: "Mr. Engineer, the only really important thing in the mix is to keep the lead vocals above everything else." *Guitarist, two minutes later*: "Dude, my lead guitar needs to ride above everything, especially the vocals. Last night my girlfriend told me the vocals were drowning out all my riffs." *Backup singer*: "Last week, my boyfriend said that the backing vocals couldn't be heard." And so on.

So Rule 2 is that *one* spokesperson from your act should be appointed to tell the sound provider what's needed. This covers console inputs, plus anything like backing track playback, plus general guidelines about how the performance should sound, *sans* significant others' opinions from previous gigs.

If a written document of your band's front-of-house and monitoring needs was sent in advance, you should expect that a sound system with adequate inputs, mixes, and power will indeed be

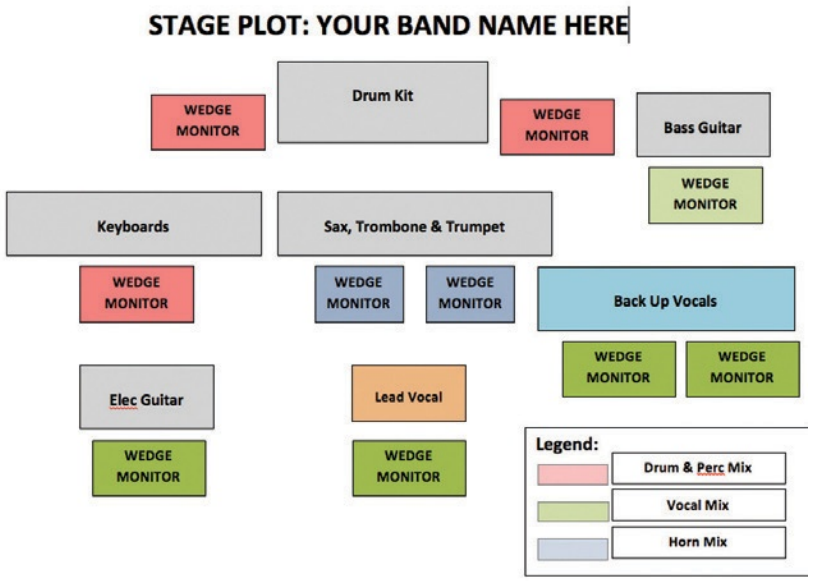


Fig. 1. This homemade stage plot shows that you don't need fancy graphics or too much detail to get the needed information across. Simpler is often better.

provided. (The exception is if a festival promoter is paying the sound company for a far smaller system than your band's footprint requires, but in any case, sending advance info is far better than *not* sending it!) Most of the mics, direct boxes, and stage monitors should be included. Less common items, such as a piano pickup or an unusual mic, should not be expected unless agreed upon in advance. If you didn't send any prior info, you'll get what you get, and it may have fewer mics, inputs, and/or monitor mixes than you need.

Make a Stage Plot

The Stage Plot is a simple diagram that shows where the various instruments and vocalists will be positioned onstage (see **Figure 1**). Detail is good, but clarity should take precedence. If you can fit it in, a description of what each mic or line is for (*e.g.*, "SM58: lead male vox") is useful, as this helps the engineer rapidly identify who's who, which can mean the difference between sweet sound and crowd-chilling feedback if a sudden adjustment is required. Make sure the name of your band is prominently displayed on everything.

Make an Input List

Since few humans can remember 20 or 30 console inputs, provide your engineer with an input list. This is a simple series of rows columns. Each row is an input, and in the first column is a description of the instrument or voice. Personal names are nice, but it's going to be hard for an engineer who's just met you to remember who's who. It's better to state "lead guitar," 'lead guitar vox," (vocal mic) "keys," 'keys vox," "B/U vox blonde," "B/U vox tall guy," and so on. Put personal names in another column for reference.

Also, you can number the inputs 1 through XX, but the sound engineer may wish to use different input numbers to make it easier to shift from band to band when multiple acts are present. So leave an open column so that physical input numbers can be relabeled—or, print your numbers in a lighter-colored font so they can be overwritten with a marker.

Next, identify what type of transducer or line relates to each input; e.g., "kick: SM57;" "keys: XLR direct outs from amp;" "lead vocal: Neumann KMS105 (supplied);" and so on. All band-supplied mics, direct boxes, or other sources should be marked with your band's name and given to the engineer or stage manager.

Rule 3: Thou Shall Not Ask for Additional Inputs at the Last Minute! At arena rock concerts, award shows, and other large-format events, we always keep an extra four or five general-purpose mics on each side of the stage, ready to go. There's often a guest guitarist, a new emcee announcing the next act, or a trio of backup singers who weren't mentioned until five seconds before those mics need to be handed out.

In the real world of bar gigs and corporate casuals, there may not be any more mics, spare console inputs, or lines on the snake. So if you're going to need extra mics at any point in your sets, ask for them when you first meet with the sound operators. Better still, get the sound vendor's contact info and ask a few days before the gig. This is especially important if there's just one engineer working a multi-band event. When you demand a couple of extra mics 30 seconds before the band starts, you may not get them and you'll delay your start time.

Monitors

Your stage plot should show the location and number of stage monitors, along with the individual mix that's assigned to them. In some cases, a single monitor mix might be all that's available. But often, two, three, or more mixes are possible. Assuming that several monitor mixes may be available, plan in advance how to utilize them. You don't want to be discussing "who gets what" half an hour before downbeat. If you have complex monitoring requirements, create another document for the engineer. It should correlate with the Input List and Stage Plot, giving a guideline for what's sent to each monitor mix. A word of warning: if one engineer is mixing both house and monitors from a single board, the simpler your monitoring requirements, the better. Keyboard players should consider monitoring their gear through whatever amp or powered stage monitors they normally carry and sending the house a stereo (or mono, depending on how the main P.A. is run) mix from a combo amp or compact mixer. Here as always, advance communication is key.

More Dos and Don'ts

If you can share a drum kit or even part of a keyboard rig (think about a heavy stage piano or Hammond B-3) with other acts on the bill, it will make set changes go *much* faster, and the balance and tonalities will already have been established. Have at least a handshake agreement in place that if another musician damages your gear (*e.g.*, splitting a drum head), you'll be reimbursed.

Do *not* plug or unplug anything to or from the provided sound system without permission. It might seem like a quick way to solve a monitoring issue to, say, plug your own wedge monitor into the last open loop-through output on a front-of-house speaker. That also might cause the amplifier to go into thermal shutdown if it's already driving a low-impedance load—and you might blow the drivers in your wedge. Talk to the engineer first—chances are you can work something out. Again, though, if your act has provided adequate advance information in the first place, you'll be far less likely to *need* to cobble anything together at the last moment. ♫

Ken DeLoria has had a long and varied career in the music business as a sound engineer and musician—most notably as the founder and CEO of loudspeaker manufacturer Apogee Sound Inc. He can be reached at kdeloria@gmail.com.

Here's a typical mastering chain with a compressor, EQ, and level maximizer.

Levels, EQ, and Dynamics

BY MITCHELL SIGMAN

AS WE'VE EXPLORED IN PREVIOUS COLUMNS, PRE-RECORDED BACKING TRACKS can add impact and dimension to live performances, but level, EQ, and compression considerations are of paramount importance to insure clarity and audibility. Here are some tips for fine-tuning backing tracks.

Roaring Versus Restrained

When setting recording levels, it's usually optimal to set meters within a safe margin of "going into the red" for best fidelity. In the case of backing tracks, maximum level isn't necessarily the best choice. Let's discuss two hypothetical track situations: one contains minimal parts, such as a single repeating flute motif. The other track includes a booming TR-808 kick, powerful sixteenth-note synth bass, stacked backing vocals, and horn section hits. The house sound engineer sets the track levels at sound check and doesn't ride them throughout the show.

If the recorded level is at maximum for the single flute part, the result might be a piercingly loud flute, or inaudible playback of the latter huge, layered track. The obvious solution is a sound engineer who knows your music and when to ride track levels for the best mix. But if you need to work with a set-it-and-forget-it sound engineer from the club, it's best to take matters into your own hands by creating tracks with "preset" levels. In practice, set sparse tracks to about one-third volume on the meters; if the track is dense, set it to a far "hotter" amplitude like –6dB or even –3dB. This essentially "builds in" the appropriate volume.

The above may seem counter-intuitive, as you might think that the denser track would be mixed lower since the volumes of all its different parts can accumulate. That's true when multitrack mixing. Here, it's a backing track, so you've already mixed it down to a monaural track—presumably the only one you're going to use for a given song. That reverses the situation.

Level Headed

Another important facet of keeping tracks audible and controlled is regulating dynamics by making quiet things louder and loud things quieter. Insert a compressor plug-in across the master DAW bus and dial the threshold control back for a few dB of reduction—too much and you'll hear audibly squashy artifacts. Following the compressor I'll usually insert a level maximizer, such as Waves L3. These add extra punch and volume, but again, be careful to use it sparingly to avoid pumpy artifacts. If the track is relatively sparse, skip the level maximizer, as the goal of these is to push level as close to "the red" as possible and make sure the maximizer is the final plug-in in the chain.

Get the Balance Right

A powerful live P.A. system will sound different than a home studio, so EQ backing track mixes with that in mind. If the tracks contain heavy bass, such as electronic kicks or huge synth bass, dial back the lows with a low-shelf EQ. This too may seem counter-intuitive, but that kick that sounds killer in your bedroom studio will likely be too much through a masssive P.A., potentially overpowering the band and likely driving the sound guy nuts. If you have a spectrum analyzer (I use the one in Logic's Channel EQ), bass frequencies can go a few dB over the 0dB center line but don't let them get much louder. Also be aware of potential "ice pick" mid-highs in the 2–4kHz range. If there's a lot of audio energy here, a gentle dip will make your soundman and audience thank you. Don't sweat super-high frequencies much; most live P.A. systems don't have much going on past 14kHz, especially once you factor in the room. ♫

Family owned & operated for almost 90 years!

THE GUARANTEED LOWEST PRICES!

the largest selection,
the most knowledgeable people,
the lowest prices,
all guaranteed!

SamAsh MUSIC DIRECT

SamAsh.com
1-800-472-6274
Real musicians are standing by 24/7

Dramatic Filter Swells

BY FRANCIS PRÈVE

AS THE CYCLICAL NATURE OF DANCE FASHION MARCHES ON, THE CURRENT trends of house music are co-opting classic '80s funk and '90s R&B sounds. In the next two columns, I'll be deconstructing a pair of definitive sounds from that era. This month, we'll take a closer look at filter swells. One of the classic synth turnarounds in funk is to play a chord (often a major or minor seventh) that swells harmonically then stops abruptly on beat 1 of the next measure. Think of old Cameo or Prince tracks and you get the picture.

This sound is quite easy to do using any analog polysynth—virtual or otherwise—so we'll use Reason's Subtractor here.

Step 1

Reset Subtractor to its default settings and turn off velocity modulation to the filter envelope. From there, turn on both oscillators, set them to sawtooth, and detune them five cents in opposite directions.

Step 2

The secret to the swelling sound is a combination of envelope modulation of the filter cutoff, combined with a "gate" amp envelope with full sustain and immediate release. First set the cutoff and resonance to minimum. Then zero out all of the filter envelope parameters and set the envelope amount to maximum. This way, the attack segment of the filter envelope will control the duration of the swell.

Step 3

For the finishing touch, add a tiny bit of slow triangle wave LFO to the pitch of both oscillators. That will give it the classic '80s funk vibrato wobble. For realness bonus points, assign the LFO depth to your mod wheel and add the vibrato manually, as the chord swells. ♫

THE MIGHTY Mellotron®
– When only the real thing is good enough –
Featuring sounds of the Chamberlin®
The M4000D
The M4000D has 100 classic Mellotron and Chamberlin sounds plus real wooden Mellotron keys with polyphonic aftertouch
The M4000D MINI
The M4000D MINI has the same 100 sounds and main features, but has standard high quality plastic keys
OUT NOW: THE ORIGINAL MELLOTRON IPHONE APP →
Mellotron M4000D M4000D Mini MkVI and MkVII
© M Resch AB, Stockholm, Sweden
For info and orders: markus@mellotron.com Mellotron.com
Making Mellotrons since 1999
Making Mellotron parts since 1989

Guitar Player

ROCK 'n' ROLL FANTASY CAMP™

PRESENT

THE

ULTIMATE MUSICIAN'S FANTASY CAMP

ALL SKILL LEVELS AND INSTRUMENTS WELCOME!

LIVE IN LAS VEGAS • PRESIDENT'S DAY WEEKEND FEBRUARY 13-16, 2014

WITH SPECIAL GUESTS:

JOE PERRY

(AEROSMITH)

AND

STEVE VAI • ERIC JOHNSON

MICHAEL ANTHONY (VAN HALEN/CHICKENFOOT) • **JOHN 5**

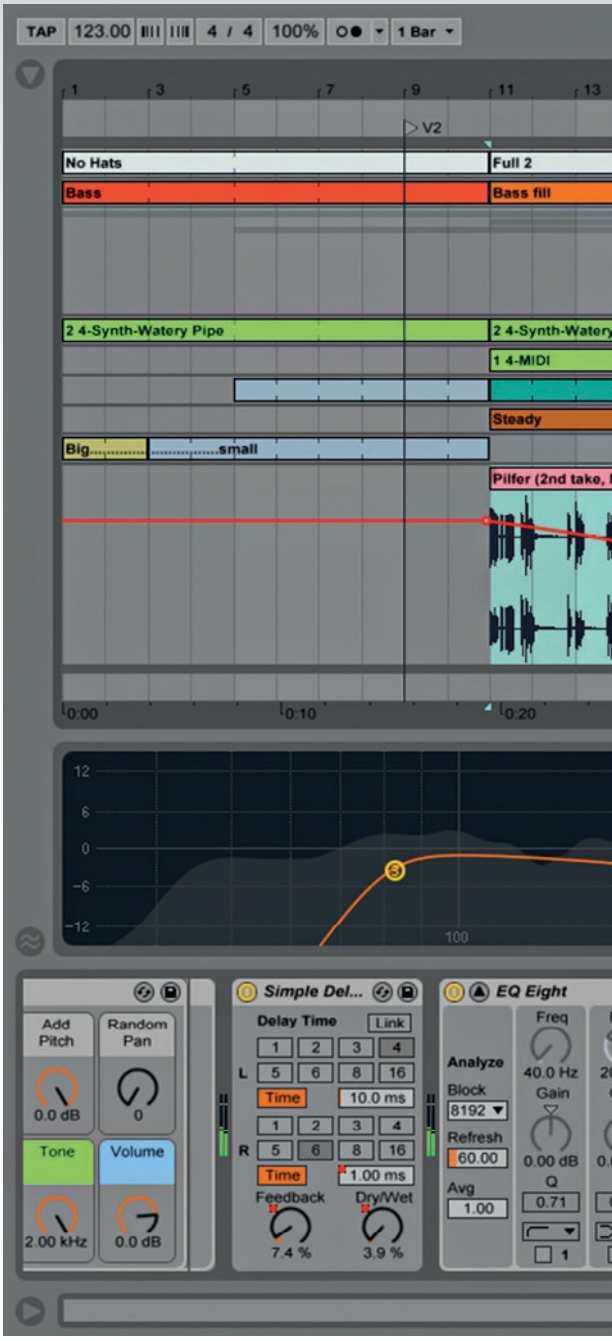
And Rock Star Counselors: GARY HOEY, ELLIOT EASTON (THE CARS), TONY FRANKLIN (THE FIRM) & MANY MORE!

SPACE IS LIMITED! RESERVE YOUR SPOT TODAY!

888.762.2263 • rockcamp.com

ABLETON Live 9

BY FRANCIS PRÈVE



FOLLOWING ITS INTRODUCTION 12 YEARS AGO, ABLETON LIVE QUICKLY developed a cult following because it was the first DAW that let musicians improvise their productions. Not to be confused with improvising on your instrument—we all do that—Live let you overdub, loop, edit, produce, and perform *as you composed*, without ever hitting the stop button. After a three-year hiatus, Ableton has returned with the latest incarnation, in which they've delivered a slew of new features that you won't want to live without but never realized you needed.

Interface

The overall look and feel of Live remains intact. If you've used previous versions, you'll be right at home in Live 9. That's not to say that everything is the same—there's a bit of adjusting to do. But the transition is generally pleasurable, since every change is an improvement, right down to details like the ability to adjust the brightness, hue, and color saturation.

Live 9's new browser is a thoughtful revision to the way your production tools are represented. Everything from Live's devices to samples to loops is now neatly categorized. A new "Places" section in the browser sidebar helps keep your third-party and user-created content—stuff like Live Packs, loop libraries, and frequently accessed projects—more clearly organized.

Also, Live's indexing system works transparently in the background to keep everything searchable. As I was configuring Live 9 for my own workflow, I added my folder of go-to soundware to the Places area and in about five minutes, Live had completely indexed that content. Typing in words like "conga" returned intelligently organized results, clearly indicating the source of each of these samples. While search has been available in Live for several versions, this new iteration feels much smoother. This is essential for keeping track of everything in any Live user's constantly evolving library of presets, samples, and clips.

Snap Judgment

PROS Flexible audio-to-MIDI conversion. Improved integration of Session and Arrangement views. Upgrades to compressor, gate, and EQ. Automation now includes curves. Huge sample and preset libraries. Max For Live now in Suite. Dual display support in Live 9.1.

CONS Converting audio files to MIDI requires extremely clean material.

New Effects

The Standard version of Live 9 includes improvements to several key effects devices, along with a brand-new compressor called Glue (see **Figure 1**). I've been using Glue for several years since its original release by Cytomic, and it's a stunning re-creation of an SSL-style bus compressor. The Live 9 version of Glue is sonically identical. Without a doubt, Glue has become my secret weapon for absolutely massive drums. Between its punchy sound, sidechain options, and wet/dry mix knob for parallel compression tricks, this compressor is so addictive that it's tempting to

put it on *all* your tracks. Of course, that's overkill. The best approach is to use instances on your drum bus and master bus. Glue will give your mixes "that sound" with a minimum of fiddling.

Distinct from Glue, the new Compressor and Gate devices now include a cool scrolling visual display of the dynamics of your signal, with bright orange lines that clearly indicate threshold levels and the overall relationship between processed and original signals. It can't be overstated how much more intuitive the dark art of dynamics processing immediately becomes when using these tools. The new interfaces clearly reveal how compressors and gates actually work, in a way that makes dialing in your desired results with extreme precision an educational process.

There are also a few new parameters in each of those devices. Gate now includes a Return setting that can finesse the threshold and release behavior of the device. In practice, this lets you take a busy drum loop from a sample pack and fine-tune the gate to take out certain percussion elements when the Return knob is at one value (leaving just the kick and snare, for example), and then reintroduce the other percussion with a simple twist of the knob. (For the technically minded,

Fig. 1. An SSL-style bus compressor, Glue's name says it all when it comes to making your mixes more punchy and coherent.

the Return parameter is a hysteresis control under the hood, *i.e.*, a secondary threshold that determines when the gate should close.)

In addition to the new scrolling visual mode, Live's Compressor device includes some subtle variations on the previous version. For example, the old "Opto" option has been replaced by an "Expand" mode, which does some nifty inverse compression tricks. Additionally, the arcane FF1, FF2, and FB types have been replaced by the ability to switch the envelope response between logarithmic and linear. There's a wet/dry knob like in Glue, so parallel compression is a breeze here as well.

EQ Eight also gets a makeover that's more intuitive and musical. It now includes an integrated spectrum analyzer that lets you quickly pinpoint frequency ranges that require attention. You can also pop the EQ into a larger window for more precise mouse control of your EQ bands. Rounding it out, there's an adaptive Q (bandwidth) feature that narrows each EQ band based on how much cut or boost you're applying, which is exactly how pros approach this process. Using the adaptive Q in conjunction with EQ Eight's new "Audition Mode" feature—which solos just the band you're adjusting, so you can hear exactly what you're doing—makes the process of EQing a track in the context of a mix an absolute joy. With the oversampling (a.k.a. "Hi-Quality") option enabled, the EQ also seems to sound cleaner. But maybe that's just because getting great results is now a lot quicker.

Max For Live

The now standard inclusion of Cycling '74 Max For Live with the Suite bundle makes it an irresistible choice for sound designers and electronic music producers. By now, Max For Live has achieved an almost sacred status among synthesis geeks, and covering its features in depth warrants its own review. It's essentially a toolkit of DSP "Legos" that you can hook together to customize your own audio and MIDI processing tools from scratch. Because of this modular approach, beginners can start out using pre-configured modules (like LFOs, filters, delays, and envelopes) to build their own unique plug-ins, while master programmers can dive deeply into coding, creating unique effects that they can then optionally share with the user community.

With Max For Live, Ableton has included a massive array of additional instrument and effect plug-ins that increase its production value immensely. For example, there are two convolution reverbs that are capable of both realistic acoustic spaces and otherworldly effects. I used a sample of a herd of cows mooing as an impulse source that resulted in a softly undulating "reverb" that would have been impossible to create using any other method (see **Figure 2**).

Another Max device that makes Suite a worthwhile upgrade is version 2 of its notorious Buffer Shuffler effect, which is a bit of a cross between iZotope Stutter Edit and Live's Beat Repeat device. With Buffer Shuffler 2.0, you can crank out those chopped vocal effects that are so popular in trance music with ridiculous ease. It's also capable of rhythmically gated pads and ReCycle-like drum loop tricks.

On the synth side of Max, Live Suite now includes a collection of ten or so drum synths, optimized for everything from gorgeous TR-808 claps to kicks to Karplus-Strong twangy bits. If you dig the sound of vintage drum machines, you'll be in hog heaven.

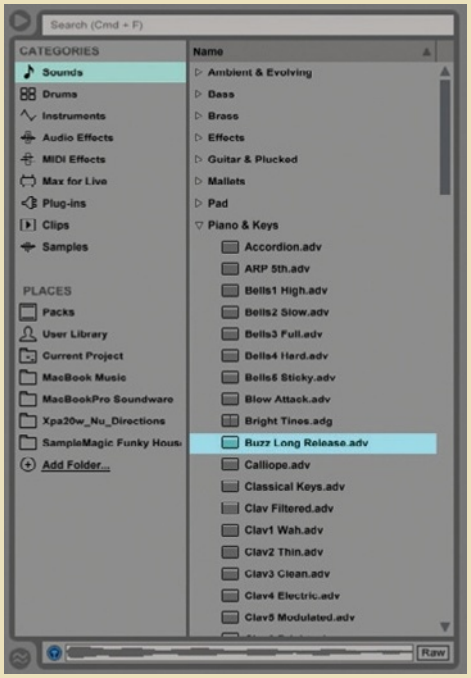
Those are just a few of the tricks in Max For Live's bag. Other free Packs from Ableton's website include harmonizers with integrated frequency shifters, multi-tap delays, LFOs and envelopes that can be used on almost any parameter within Live, a few nifty synths optimized for creating bells, and even basic additive synthesis. Honestly, that's just scratching the surface.

Audio-to-MIDI Conversion

Ableton went to town on Live 9's MIDI implementation, introducing features like audio-to-MIDI tools that almost feel like magic when used

Fig. 2. From Max For Live comes Convolution Reverb Pro, which can process signals in ways that go far beyond reverb.

INCLUDED CONTENT



Ableton has made some changes to how content is stored. Previously, both factory and user content comingled in its library, making things a bit complicated for musicians with large collections of custom material. Now, the factory data lives in its own folder, while user content is located elsewhere, which helps greatly with backing up your own data without affecting the factory presets—and there's a truckload of factory data in both the Standard and Suite versions.

The 11 GB Standard version has received a facelift and tilts strongly toward pop, rock, dance, and urban styles. Drums and percussion, both acoustic and electronic, abound. There's a ton of synthesis material in here as well, ranging from samples of found objects to waveform data for building your own presets. Traditional instruments like grand piano, guitar, and bass are well represented.

While Live Standard is a great starting point for electronica, Live Suite's 54GB of content delivers the goods for scoring and rock/pop production. The orchestral content includes strings, woodwinds, brass, and symphonic percussion, and it's all good stuff. Suite's drums are equally strong, with excellent session kits and Latin percussion. Rounding out the package is a selection of sampled vintage synths from Puremagnetik.

As for soft synths, the differences between Standard and Suite remain the same, with the standard version focusing on sampling (from Simpler and Drum Racks) while Suite includes the full monty of FM, virtual analog, expanded sampling, and physical modeling synths.

judiciously. For example, there are two pitch-to-MIDI algorithms—one for melodies, another for chordal passages—that can convert audio loops and samples to MIDI data for further editing and transformation. There has been some debate about the accuracy of these "translations," and for this review, I've done a lot of experimentation. Here's what I've found.

For either melodic or chordal pitch conversion, you need clean source material. Vocals drenched in reverb or delay are going to confuse these algorithms. Ditto for chorus and flanging. That's not Live's fault, really. Think about echo for a moment. If you have an instrument with repeats in the background, the algorithm has to figure out what to do with those extra audio events. In such cases, results will vary. The same goes for singers who use a lot of vibrato and pitch sweeps . . . or trombones.

On the other hand, if you give Live a well-recorded dry instrument, whether from a library or recorded in your studio, you'll get much more useful results. For example, I took a very famous, very dry *a capella* vocal—making sure it was warped and looped correctly—and Live turned it into an exact MIDI transcription, with only one extra grace note (which was easy to delete in the editor).

For the harmony (chordal) converter, I fed it a clean boys choir progression and the resulting output actually added some lovely piano nuances that weren't in the original. That was fine with me, since blending the two components created something extremely cool that I would never have composed on my own.

There's also a Drums-to-MIDI tool that works beautifully on recorded kit material, accurately focusing on the transients of snares, hats, and toms while keeping the feel of the original groove. But feeding it elaborate mixes of drums, congas, timbales, and shakers was more than it could handle. Again, this is hardly surprising.

So, do these tools work? Absolutely, and when you think about what they're actually *doing*, they work exceedingly well. But as a producer, you have to meet them halfway and feed them clean material.

Even so, feeding in "messy" material is a great way to generate loops and riffs that are extremely original once you've applied a few of Live's other new MIDI features to them. For example, in the MIDI Clip View window, there are several new tools for transforming your riffs in musically intelligent ways. The new Legato button extends every MIDI event to the beginning of the next event, so that there are no gaps between notes. If you've ever manually extended each chord in a pad progression to line up with the following chord, you'll appreciate this feature.

There are Reverse and Invert buttons as well. Reverse is self-explanatory, as it takes your MIDI clip and reverses the notes, keeping their original durations. Invert is a bit subtler, as it flips your sequence "vertically" so the highest notes become the lowest and vice versa, with all of the notes in between aligning and with the original rhythm and phrasing intact.

I found the Invert function incredibly useful. Many times, I'll come up with a rhythmic riff that's melodically interesting, but doesn't quite go all the way for a track I'm developing. Hitting Invert may not automatically deliver hooks, but it's quite useful as a "happy accident" generator, especially when working with material created by the audio-to-MIDI functions.

Fig. 3. As before, the Session view is where you leave linear DAW land and harness Live's power as a realtime composition instrument.

Automation

Live's automation tools have also received a lot of attention, bringing the Session and Arrangement operations into much closer alignment. In previous versions of Live, automation clip envelopes (for doing tricks like rhythmic filtering and morphing delays) were separate entities from timeline automation in the Arrangement window. This was due in large part to the fact that automation proper didn't exist in Session clips—until now. In Live 9, if you drag or copy an automated clip from the Session view (see **Figure 3**) into the Arrange view, its envelope is converted to timeline automation for further editing in your overall composition. This feature works in both directions, of course, and Live 9 can also convert arranged tracks into discrete Session scenes, which is going to be a boon for live performances and DJs.

Another huge improvement is the inclusion of curves. Yes, Ableton took this long to implement this, but it's here now. Better still, applying curves is an incredibly straightforward process, using a small collection of key commands and bypassing those fiddly Bezier levers.

Naturally, all of these new DAW features have had an impact on other user interface elements, most notably the transport controls. Most of these changes involve simply moving the elements to other visible areas, like clip quantization (which is now in the tempo section) and the indispensable Back-to-Arrangement button that now lives by the locator markers in Arrangement view. There's also a new overdub button in Session view for adding MIDI material or recording your clip automation in real time.

As if all of these upgrades weren't enough, the recent free Live 9.1 update includes two power-user features: dual display support and improved sample rate conversion for rendering mixes. This update was a public beta at press time, but in our tests, these worked properly.

Conclusions

After spending a few weeks digging deeply into Live 9 Suite, I honestly regret putting off upgrading from version 8 as long as I did. Live 9's new features have thrown my productions into warp drive. The new gate, compressor, and EQ have truly improved my mixes; the tools in Max For Live are inspirational; and the audio-to-MIDI functions have given my loop libraries a new lease on life. As to the software's reliability under fire, in eight years of performing electronic music live and DJing, Live has only crashed during my set once. My advice: Go for Live Suite. Its synths and effects compete with those bundled with many other DAWs. If you haven't been indoctrinated into the Cult of Ableton, Live 9 could well push you over the edge. The sheer musical thrill of improvisational composing is nothing short of addictive.

Bottom Line

An absolute must-have upgrade for Live fans and an addictive gateway drug for newcomers.

Live Standard: $449 | Live Suite: $649
ableton.com

Hear It Now!

- Clips of Live's audio-to-MIDI tools, convolution features, Glue compressor, and more!

keyboardmag.com/january2014

ABLETON Push

BY FRANCIS PRÈVE

Snap Judgment

PROS Deep and thorough integration with Live 9. Gorgeous and sturdy design. Dedicated buttons for most commonly used parameters. USB powered.

CONS Size and weight may complicate gigging for casual DJs. It takes some time to fully master the unit.

Bottom Line

The first hardware controller that truly transforms Live into a hands-on musical instrument.

$599 list | $499 street
ableton.com

IT'S A TESTAMENT TO THE UBIQUITY OF ABLETON LIVE THAT AN ENTIRE ecosystem of MIDI controllers has arisen to support this performance-oriented DAW. From Akai's APC line to Novation's LaunchPad and LaunchKey line, controller designers all seem to want a slice of the Ableton pie.

Ableton's new Push controller is the summit of this trend. With its massive grid of touch-sensitive pads, tons of dedicated buttons, long touch-fader, and a sexy readout that constantly changes to reflect your interaction with it, Push is far more than a controller for Live. It's a true extension of Live in hardware form.

The first thing I noticed was the overall quality of its construction. Not only is it built like a tank, its overall aesthetic would make Jony Ive jealous. It feels luxurious in a way that no other pad controller I've encountered can match. That said, it's larger than a laptop and surprisingly hefty, so calling it "backpack friendly" may be a bit of a stretch, but in a studio environment, it's a veritable work of art.

Upon plugging in my laptop, Push came alive (it's USB powered) and the LCD immediately prompted me to open Live. Once Live was active, the screen changed to reflect my recording options, with Live's preset and device library prominently displayed and easy to navigate.

I selected a TR-909 kit from the library and the pads instantly changed to reflect a Roland-style scrolling two-bar loop, with the lower left corner of the pads shifting to function as drum select buttons. I tapped the pads to determine which drums were assigned to them, then selected the kick. I hadn't yet read any documentation—I'd merely glanced at a YouTube tutorial the day before—yet I was up and running within ten minutes of opening the box.

Because of its thorough integration with Live, Push can serve as an interface for nearly all of Live's musical and performance functions. You can do step sequencing, scene selection, editing effects (with ultra-smooth endless knobs, I might add), and automation sweeps with the touch-fader. There's even an innovative keyboarding option that reconfigures the pads—with your choice of key and scale—so that you can play riffs and chord progressions fluidly and in a way that transcends the traditional chromatic keyboard. Toggling between all these modes is almost effortless, thanks to the massive array of dedicated buttons for most commonly used parameters and functions. The trick is devoting the time to developing the necessary muscle memory. That said, once you've spent a few days immersed in Push, it will be excruciating to go back to a mouse.

While it's easy to make armchair comparisons to Native Instruments Maschine or the Akai MPC, that's completely missing the point. Push actually takes you out of the click-and-drag paradigm that has become the definitive way of working with a DAW, and takes the creation and performance process with Live to dizzying new heights.

That said, Push is not for everyone. There are certainly users who will always prefer the feedback loop of a trackpad, cursor, and a large LCD, but for artists who are passionate about Live and want to approach their music from a new perspective, Push is irresistible—and a true paradigm shift. ♫

Products on command, knowledge on cue.

www.BandH.com

A wealth of options at the tip of your finger. Find exactly what you need through advanced search filters and Live Help. With in-depth product demos, podcasts, and customer reviews, you'll know exactly what you're getting. Knowledge is expansive. Get more of it at B&H.

Download from Android Market

Available on the App Store

Subscribe to the B&H catalog
www.BandH.com/catalog

Visit Our SuperStore
420 Ninth Ave, New York, NY 10001
800-932-4999
Speak to a Sales Associate

B&H PHOTO - VIDEO - PRO AUDIO
The Professional's Source™

NYC DCA Electronics Store Lic.#0906712; NYC DCA Electronics & Home Appliance Service Dealer Lic. #0907905; NYC DCA Secondhand Dealer – General Lic. #0907906 © 2013 B & H Foto & Electronics Corp. JN121138

YAMAHA CP4 Stage

BY JON REGEN

WHEN IT COMES TO YAMAHA DIGITAL PIANOS, I'VE PLAYED MORE THAN MY fair share. There was the Clavinova CLP-300 on which I made my audition tape for the Eastman School of Music and the Yamaha P200 I used on my first recording gig. I've played tiny European jazz clubs with the P95, and the 2,000-seat Shepherd's Bush Empire in London with the CP300. Until recently, I used a CP33 as my go-to portable, preferring it to more recent stage pianos for its near perfect pairing of touch, tone, and un-terrifying weight. In 2011, I reviewed Yamaha's newest stage pianos at the time: the CP1, CP5, and CP50. "CP" designates Yamaha's most professionally targeted stage pianos, and the CP4 seeks to surpass all that came before. How does it fare?

Snap Judgment

PROS Spot-on acoustic and electric piano emulations. Excellent additional sounds. 128-voice polyphony. Realistic, graded, real wooden key action. Manual sliders for 5-band EQ. Balanced XLR outs. Records audio to USB drive. Light, portable, and roadworthy.

CONS No onboard speakers for practice.

Overview

These days, you'll see many kinds of "88-ers" on stages, workstations such as the Yamaha Motif XF8 included. The CP4 isn't one of those; there's neither multitrack sequencing nor every sound imaginable inside. But if you've been searching for an acoustic piano replacement-slash-vintage keys machine that sounds great and weighs less than 40 pounds, you've just met your match. The CP4's reduced weight comes in part from not having onboard speakers. True, most pro stage keyboards don't have them, but the CP300 and many Yamaha P models did, which I always found nice for practice or for warming up before the show when the monitor system was muted.

With the CP4, Yamaha has returned to the streamlined style of its earlier stage piano models like the CP33. The front panel is easily navigable, with a large, backlit LCD and a generous array of well-placed sliders and buttons. Where the CP1, CP5, and CP50 had only a pitch-bend wheel, Yamaha has added a modulation wheel to the CP4.

Around back, you'll find foot switch and controller jacks, five-pin MIDI ports, music stand support holes, and a 1/8" stereo input for routing a music playback device to the outputs (saving you a mixer input for backing tracks or break music). In addition to headphone and 1/4" stereo outputs, the CP4 includes balanced XLR outs—a pro touch for running directly into a stage snake.

A USB-B port provides MIDI connection to your Mac or PC, and a USB-A port lets the CP4 record a stereo WAV file of your performance to an attached drive. There's also an internal power supply, so no wall wart!

Keyboard Feel

On the CP4, Yamaha has updated their stage piano action yet again, with real wood white keys and synthetic ivory key tops—the white key

surfaces are slick, though, not textured. Yamaha calls this new action the NW-GH, which stands for "Natural Wood Graded Hammer." It combines the best aspects of the NW-Stage action (non-graded wooden keys) of the CP1 and CP5 with the GH action (graded plastic keys) of the CP33, CP50, CP300, and now the CP4's little brother the CP40. How does it feel? In a word, great. Not many other 88-key digital instruments feel this piano-like. The CP4 has that convincing combination of resistance and playability that makes real pianos so pleasing. While some players thought the key dip on the CP1 and CP5 was too shallow, under my fingers the CP4 felt uncannily like a real piano. There's no aftertouch, but for most applications this won't be a deal-breaker.

Architecture

Unlike Yamaha synths and workstations (like the Motif and S-series), the CP4 has no separate "User Voice" mode for single sound programs. All data are stored in a Performance (multitimbral setup). Each Performance can have three internal sounds (Main, Split, and Layer) as well as address four zones from external sound sources. This doesn't mean all the sounds have to be active at once, but they're saved and able to be called up. The Main sound always stays active, while the Split and Layer sounds can be set to off. Don't worry—if you don't hear a sound, it's not taking up polyphony.

Other editable aspects of a Performance include system-wide effects like reverb and chorus, and inserts including Yamaha's VCM effects (Virtual Circuit Modeling), which model classic outboard hardware and stompboxes. A Performance can have two inserts at once, each of which contains two independent effects. Your choices for types range from stereo tremolos and flangers to detail-oriented options like adjusting the hammer strike position on a Rhodes sound and altering its preamp. There's also a Master Compressor (with seven presets) to help the CP4 cut through a mix, a five-band master EQ, and a surprisingly useful onboard metronome.

In Use

My demo CP4 arrived just as I started writing sessions for a new album. While I usually write on an acoustic grand piano, I thought jumping in with the CP4 would be a great test. I powered on, and up popped "CFX St.," the sound of Yamaha's new flagship CFX concert grand. I got to play a real CFX earlier this year, so I know what that nine-foot beast sounds and feels like. In an instant, I was back at that behemoth, with its rumbling bass and crystalline top end. The sampling here sounds crisp and clean, with no audible signs of looping. There's something organically intoxicating about the CP4. It draws you in. The NW-GH action is a perfect complement to the new CFX sound set.

A press of the "Layer" button followed by the "Pad" button got me channeling my inner Bruce Hornsby, with the sumptuous "NeoCrystal" dialed in behind the CFX. Volume adjustment per Voice is immediate: Just grab the corresponding slider for the Split, Layer, or Main part.

The two other concert piano sample sets (each, like the CFX, with 15 variations) impress as well: the CFIIIS with its darker timbre, and the S6 with its round, intimate allure. While playing the S6, I hit the "Split" button and then chose the Guitar/Bass voice named "AcousticBa." In an instant, a jazz duo was born. The S6 is a natural choice for more intimate ballads and jazz fare, in settings where the tone of the CFX or CFIIIS might be overkill.

A quick turn of the Data dial reveals the numerous variations on each Voice. Electric pianos impress, with realistic Rhodes, Wurlitzer, CP80, and DX-type sounds.

Much like the CP4's acoustic pianos, the vintage EPs are rich and detailed, with just the perfect amounts of low-end bark. Adding onboard chorus to "71Rd I" brought back memories of hearing Billy Joel's "James" (from his 1976 album *Turnstiles*) for the first time. Again, variations abound, and there are so many good presets that I could imagine using the CP4 without ever building Performances of my own. Other EP favorites included the psychedelic "75Rd Phase," a spot-on Wurly entitled "77Wr Trem," and "CP80 Chorus," which nailed the Peter Gabriel "In Your Eyes" sound perfectly.

Organ sounds are usable, but don't put your clonewheel on eBay—playing them on a weighted, wooden piano action can be be tricky. They'll work in a pinch, as will the passable Leslie simulator you bring in with the modulation wheel. Among the rest of the CP4's 433 factory sounds, synth, guitar, and percussion patches stand out as impressive.

Conclusions

While the stage piano market gets more crowded with each NAMM show, the CP4 is proof that Yamaha continues to blur the boundaries between acoustic and electronic instruments. It has just the right amount of resistance for a keyboardist to truly connect with the piano sounds, and a satisfying sound set that pairs exceedingly well with its action. From raucous rock and pop gigs, to funk, R&B, and intimate jazz settings, there's a piano patch on the CP4 to fit just about every conceivable bill. It's not a do-every-sound workstation like the Motif family, but it's not supposed to be. If you've been searching for a lightweight and thoroughly professional stage piano with great sounds and a lifelike action, the CP4 is your ticket. It's the kind of digital piano that reminds me of why I started playing piano in the first place. ♫

Bottom Line

The new stage piano to beat: a lean, mean, gigging machine.

$2,999 list | $2,199 street
yamaha.com

KAWAI VPC-1

BY RICHARD LEITER

IT'S LIKE ONE OF THOSE DREAMS WHERE EVERYTHING'S FAMILIAR BUT WEIRD. You sit in front of a sleek ebony slab with a gorgeous grand piano keyboard but no controls save for the single power button. On the back panel are MIDI and USB ports but no audio jacks. Something seems wrong—until you connect it to a good virtual software piano—at which point everything you play is incredibly right. This is what Kawai's new VPC-1 does.

Overview

Kawai has been installing real piano actions (or close to them) in digital keyboards for about 25 years now. Stage pianos like the MP-9500, MP-8, and MP-10 were jam-packed with gig-ready sounds. Various models had zone faders, control knobs, pitch-bend and modulation wheels, and even XLR outs with a ground lift switch.

With the controller-only VPC-1, Kawai has gone minimalist, leaving just (and I really shouldn't say "just") an exquisite graded piano action with real wooden keys and very ivory-like key surfaces. The net effect is first-rate physical piano feel which, when married to one of today's superb software pianos, gets better and better as you play it and encourages you to master musical passages that would normally make you feel trepidation.

The VPC-1 ships with the substantial Kawai triple-pedal array that convincingly emulates half-pedaling and after-pedaling on the damper as well as correct behavior of the sostenuto and soft pedals. There's MIDI in/out and a USB port that will power the unit, so you don't need the power supply unless you're controlling a sound source via five-pin MIDI. The "killer app," though, comes in the form of touch curves that were customized by working closely with the makers of four popular software pianos: Synthogy Ivory II, Native Instruments *Alicia's Keys*, the Galaxy Pianos, and Modartt's physically-modeled Pianoteq.

The Action

A real grand piano action is a Rube Goldberg contraption of moving parts that translates the downward motion of your fingers into the upward motion of a felt-covered wooden hammer. Along the way, this mechanism has to shock-absorb the key after your finger strikes it, keep the hammer from bouncing back and forth, lift dampers on a per-string basis, and do other things that let you transform subtle (and not so subtle) forces into musical tones.

Kawai's solution to the complaint "Why doesn't my controller really feel like a piano?" is to adapt a real piano mechanism. They craft their keys, white and black, from long pieces of wood that balance on a pivot point; so when you play you feel real-world resistance and the see-saw motion of a weighted, balanced key. Like on a real piano, the VPC-1 key doesn't directly strike the noise-making apparatus, but instead actuates a second mechanism, and *that* generates the MIDI velocity information. That info is then read by three sensors instead of the industry-standard two. This helps you repeat notes quickly and accurately, even when you barely play the tops of the keys. Kawai has also built in let-off simulation—that little bump you feel at the bottom of a very soft keystroke—to subtly resist your finger motion and let you navigate soft passages with greater nuance. Think of it all as "physical modeling" in its most literal sense.

It must be pointed out that Yamaha puts actions that are almost part-for-part identical to a concert grand in some of their digital pianos (notably the AvantGrand family and NU1), and with excellent results. But the VPC-1 is the only action of this complexity that we're aware of in a "slab" keyboard, let alone in a controller-only one.

Snap Judgment

PROS Top-flight, wooden-key, grand piano action. Five touch curve presets crafted specifically for top piano VI's. Comprehensive velocity editor software. Rock-solid construction. Looks as elegant as an Armani tux.

CONS Touch-Curve editor is Windows-only with no Mac version on the drawing board. Curved top makes stacking another keyboard or laptop difficult.

Velocity Curves

Anyone who has ever struggled with tweaking velocity curves for piano knows that you usually compromise. You often have the vague sense that if you spent another hour or two the feel would be perfect, but it never is. Kawai has addressed this frustration by creating five touch curve presets: one for each of the aforementioned software pianos, plus a "normal" curve. I played them all with Synthogy Ivory II American Concert D—my gold standard for software pianos—and found something to recommend in each of them. All in all, the normal curve suited my playing style best. The Ivory-customized curve was perfect for delicate play, but was actually a little too heavy-handed for my *fortissimo* boogie-woogie romping. Touching the power button plus one of the top five black keys changes curves, and I easily went back and forth between my top two choices, depending on how much delicacy versus bombast I needed. I had a similar experience with the curve designed for Pianoteq.

Performance

The VPC-1 is a controller for a piano purist. The triple sensor array does give you a richer playing experience than the dual sensors found in most weighted keyboards, but it's worth noting that a Casio Privia PX-350 has triple sensors at roughly one third the price and weight. What you won't get there is the physical *gravitas* of a real piano action playing a mega-memory software piano. Kawai marketing director Tom Love tells us that the RM-3 Grand II action in the VPC-1 is exceeded only by the Grand Feel Action in the Concert Artist series—the high end of Kawai's home digital pianos with console cabinetry.

The VPC-1's action is so convincing, in fact, that it feels sluggish on an EP or organ, but you can use it with something as fundamental as Apple GarageBand. (In fact, it makes the GarageBand piano play much better.) However, you won't be bending pitches or adding modulation unless you plug a controller or synth into the MIDI input. And though the VPC-1 does send release velocities, Ivory II governs its release samples via attack velocity and note duration. Virtual instruments that do track release velocities will read the VPC-1's action loud and clear.

In what seems to be a case of aesthetics over function, Kawai made the top of the VPC-1 curved, not flat, kind of like a Rhodes Mark I. As on the old Rhodes, you could adhere some Velcro to stabilize your ultrabook, iPad, or fairly lightweight synth. But there's no putting a Motif or Kronos up here in order to save a tier on your keyboard stand.

Conclusions

For the classical artist in a studio apartment, the touring pro who wishes to dedicate a slab of 88s to the piano they're running on a laptop or Receptor, or the studio owner who wants to roll out the big guns when Norah Jones comes over, the Kawai VPC-1 will become the controller of choice. It offers a kinesthetic musical experience that you just can't get without wooden keys and the physical machinations of a grand piano action. In my opinion, pitch-bend and modulation wheels (and a flat top) would not have tainted its pianism and would expand its appeal. That said, for finger-to-music connection when playing today's best software pianos, nothing touches the experience the Kawai VPC-1 serves up.

VPC EDITOR

For more customization than the five factory curves, Kawai has created touch curve editing software that gives very fine-grained control over the velocity response. You can graphically create curves for the entire keyboard, note groups, or individual keys. You can also go key-by-key, registering key strikes for a customized curve based on your finger strength and playing style. You an also assign pedal CCs and load five of your own curves into the VPC-1. The only caveat is that the editor software is only for Windows at present time.

Bottom Line

If you need a perfect software piano controller—and nothing else—no other keyboard comes close to the Kawai VPC-1.

$2,149 list | $1,849 street
kawaivpc.com

Keyboard K KEYBUY AWARD

ARTURIA MicroBrute

BY FRANCIS PRÈVE

WHEN ARTURIA FIRST INTRODUCED THE MINIBRUTE (REVIEWED NOV. '12), IT shook up the analog market. Previously, modern analog keyboards started at close to $1,000 and went up from there. The MiniBrute's $500 price made real analog synthesis approachable for the curious-but-not-committed, and its sound and features made everyone notice that a heretofore-virtual synth company could do analog right. So when Arturia revealed their latest analog synth—a scaled down version of the MiniBrute with a few *new* features thrown in—at a street price of around $300, we let out a gasp. The aptly named MicroBrute may be half the size of the Mini, but its sound is just as big.

Snap Judgment

PROS Fully analog signal path. Semi-modular design. Step sequencer. Extensive waveform options. Multi-mode resonant filter. Converts USB/MIDI to CV/gate. External input for audio processing.

CONS No MIDI out. No noise generator. Tiny keys could pose a problem for big fingers. No preset storage.

Oscillators

The MicroBrute's oscillator section is nearly identical to the MiniBrute's, with a few minor tweaks that make it better in some ways, less so in others. While the design is a single-oscillator affair, the Micro and Mini both crib their overall execution from the classic Roland SH-101. That is, whereas most synths feature switchable oscillator waves, the Micro's individual waveforms can be blended to create much more complex results than simple saw/square/triangle options. What's more, the three waveform volume knobs add a bit of overdrive to their sound when pushed above halfway, giving the Micro's sonic character a lot more meat.

The sawtooth wave includes the MiniBrute's "Ultrasaw" feature, which layers a pair of additional sawtooth waves on top of the original wave. While the Mini included its own LFO for modulating the phasing/chorusing of the additional waves, the Micro relies on its modular patch bay for this option. Even so, turning the Ultrasaw knob fully clockwise introduces a bit of very slow phase drift, giving it a subtle animation that sounds like multiple oscillators free-running but closely tuned.

The square wave includes a pulse knob for *de rigueur* PWM effects via the patch bay, but there's also a tiny detail in its design that you'll miss if you don't listen closely. It's out of phase with the sawtooth.

In simple terms, what this means is that when you blend the saw and square waves in a precise manner, you can subtract all of the odd-numbered harmonics from the result, leaving a saw-like sound that's a bit thinner since the fundamental (and its odd relatives) is removed. This is a lovely detail.

The triangle wave includes the Mini's "Metalizer" parameter, which adds aggressive harmonics to the triangle as you raise its value. This is accomplished by Arturia's proprietary foldback distortion circuit, and its sound is somewhat reminiscent of FM synthesis with a 1:1 carrier/modulator ratio. What's especially cool about the Micro's implementation is that the envelope can sweep the Metalizer without you touching the patch bay.

Finally, the Micro introduces a new type of sub-oscillator that's quite different from the MiniBrute's or any other sub-oscillator I've ever encountered. In addition to a volume knob, there's an overtone parameter that reshapes the sub's waveform. Fully counter-clockwise, it's a standard square wave one octave lower than the other oscillator waves. But as you turn the overtone knob, it does a phase trick that morphs the square harmonics until only the third harmonic (which is a fifth above standard oscillator pitch) is heard. This enables the Micro to do "that Deadmau5 fifth thing" without the need for a second oscillator. Very cool indeed.

The MicroBrute Connexion editor software gives you additional control over MIDI, note priority, and the sequencer. You can even import and export sequences.

Filter

The Micro's filter is the same Steiner-Parker circuit from the Mini. Based on the exotic Synthacon from the mid-'70s, this filter has an extremely unique sound that's more in the ballpark of a Korg MS-20 than a Moog or Mopho. It's aggressive, quirky, and very much in your face, whether you're whipping up a crunchy lead or snarling bass.

Like the MiniBrute, this filter is multimode, with lowpass, bandpass, and highpass options (but minus the notch mode). It's fully resonant and can push into self-oscillation with the knob cranked all the way. Naturally, the Micro also features a "Brute Factor" parameter, which feeds the output of the synth back into the filter. Low levels add presence and additional warmth; high amounts conjure truly chaotic audio mayhem.

Modular Features

While the MiniBrute included dual envelopes and LFOs, the Micro only includes one of each. The envelope is a standard ADSR, hardwired into the Mini's "fast" mode, which gives it a bit more snap than most. While it's wired into the VCA for the

usual amp processes, there's also a switch that puts the VCA into gate mode, so that you can apply the envelope to other destinations without affecting the volume dynamics of your sound.

The LFO is also scaled down from the Mini in that it only has three waveforms: downward saw, triangle, and square. I really liked the MiniBrute's sample-and-hold waveforms, especially when routed to the filter, but in light of the Micro's price point, their absence is a minor quibble.

Even with its scaled back LFO and envelope, the Micro's modulation options still shine, thanks to its modular patch bay that allows voltages to be routed to a wide array of parameters like pitch, cutoff, Ultrasaw, pulse width, the Metalizer, and the sub-oscillator harmonics. Thus, with one of two included 1/8" patch cords, you can apply the LFO and/or envelope to modulate those parameters.

Bottom Line

A semi-modular analog monosynth that's truly for everyone.

$349 list | $299 street
arturia.com

What's more, this patch bay is compliant with the Eurorack standard. I plugged my Doepfer into these jacks and was able to use its audio-rate LFOs and even faster envelopes for some remarkable sonic tricks. Having legit modular tools in a synth at *this* price is nothing short of amazing.

Step Sequencer

Part of the Roland SH-101's mystique stems from its onboard step sequencer, so Arturia's inclusion of an almost identical one is more than a trip down memory lane. It's a powerful addition that lends itself to alternate composition methods.

There are eight memory slots for sequences, each of which can contain up to 64 steps. Sequences are programmed by simply hitting Record, then playing keys, with each keystroke advancing you one step. You can add rests and ties via the tap-tempo pad, transpose the sequence via the keyboard, and that's it. New users may say, "So what? I'll use my DAW for sequencing," but that completely misses the point. Using a step sequencer in this manner invites uneven bar lengths and Giorgio Moroder-style sixteenth-note patterns like no other approach. Plus, having it integrated into the synth makes it ideal for gigging bands that want to add a little retro sequencing to their live repertoire

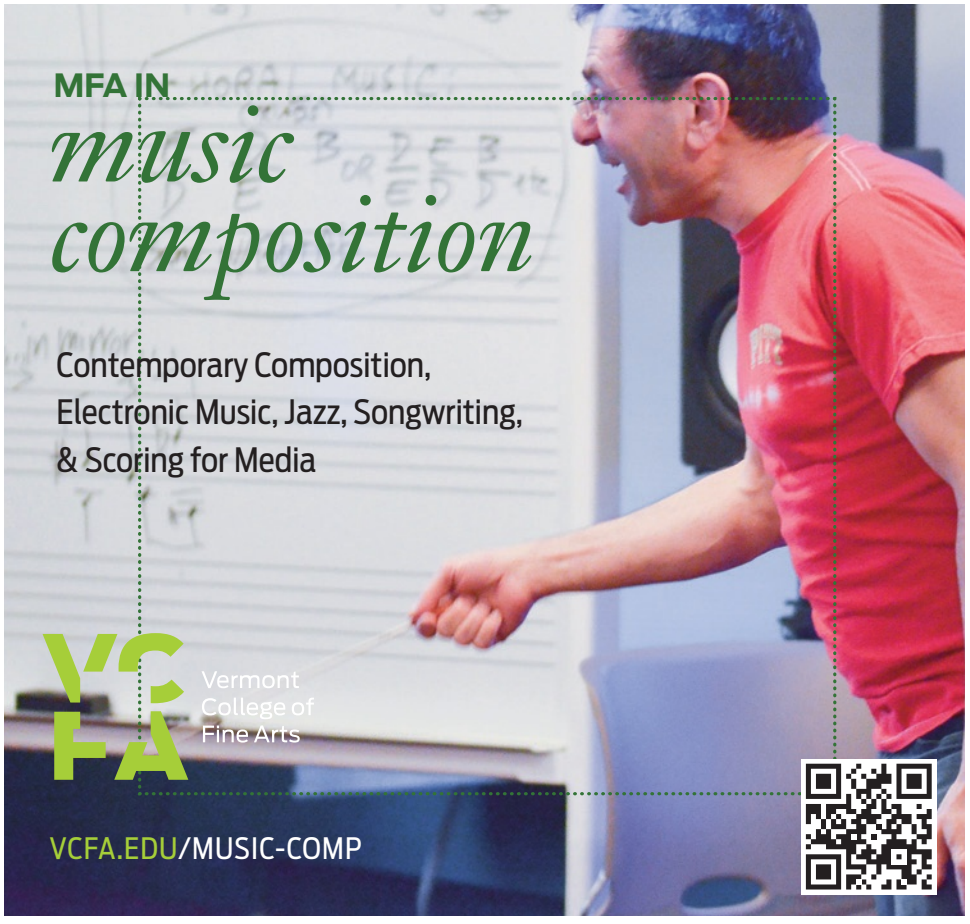
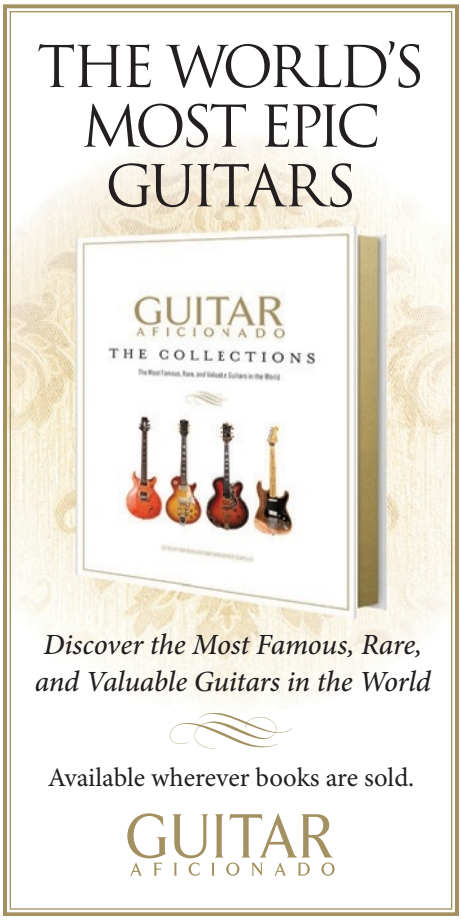
Conclusions

I loved the MiniBrute so much that I bought one, and it has since become a mainstay in my studio. The sound is anything but "pretty" compared to other contemporary analog synths, but that aggressive character is what makes it essential to my sounds. With the MicroBrute as well, the "Brute factor" is no casual hype—this synth is meaty and macho like nothing else.

Since the MicroBrute relies on the same circuits as the Mini, and includes an industry-standard CV patch bay, external input, *and* step sequencer—for about $300 street—it's an absolute must-have and wins our Key Buy award. If you already own a MiniBrute, you can patch in the Micro for dual oscillator action. If you don't already own a 'Brute, it's clear that you will. At this price, practically *everyone* will.

Hear It Now!

▸ Original audio examples.

keyboardmag.com/january2014



Read your copy of Keyboard the way you want!

Keyboard **is now available in print and can also be found in your iTunes store. Choose your subscription to *Keyboard* today – print OR digital!**

Go to www.mykeyboardmag.com for a print subscription

For the iPad version you can either search in your iTunes store OR go to www.keyboardmag.com/ipad

From lessons penned by music's brightest stars, to hands-on workshops that help layers master the latest tools, to the most heavily-cited equipment reviews in the business, Keyboard *is the only place to learn which notes to play and which knobs to turn—empowering musicians of all styles and skill levels to use music technology the way they want to. Choose your subscription method to* Keyboard *today—print OR digital!*

EASTWEST QUANTUM LEAP

StormDrum 3

BY ROB SHROCK

ALTHOUGH THERE ARE NUMEROUS PERCUSSION LIBRARIES ON THE MARKET, EastWest StormDrum 3 deserves its place by deftly bridging the world music and cinematic paradigms. In fact, I'll go so far as to say it's one of the best-sounding percussion libraries anyone has created to date.

Overview

With a clear focus on ethnic and world music percussion, StormDrum 3 (SD3) builds on its excellent predecessor, StormDrum 2. There are no traditional drum kit or standard orchestral percussion samples in SD3. The spotlight is on the exotic with a cinematic feel, although many of these sounds could easily work themselves into pop productions.

SD3 also explores the vast percussion collection of former Grateful Dead drummer, Mickey Hart. Mickey was a proponent of world music long before it became fashionable, and he has spent decades collecting and studying exotic percussion instruments from all around the globe. Additional instruments were provided by Remo Belli (founder of Remo Inc.).

For those already familiar with EastWest's "Play"

Snap Judgment

PROS Unique collection of ethnic drums, metals, and pitched percussion. Individual instruments with round-robin hits, flams, and rolls. New Play 4 engine provides 5 stereo multimic positions with SSL-licensed EQ and dynamics. True-stereo convolution reverb from EW Spaces included. Excellent recording and programming throughout.

CONS Understanding how to play many of these exotic instruments authentically could be a challenge. Levels can get hot on some patches when playing hard velocities and/or mixing mic perspectives.

AT:
GUITAR
CENTER

MOBY

CAPTURING THE MAGIC IN THE AIR

"What initially amazed me, and still continues to, even though we oftentimes take it for granted, is that the movement of air—the compression and rarefaction of air—can somehow elicit the most profound emotional responses any human is capable of having. having," Moby says. "Music doesn't exist. It's just air hitting your eardrum a little bit differently than it otherwise would be hitting your eardrum. The air hits someone's eardrum a little bit differently, in a slightly more structured way, and it makes people dance, it makes people have sex, it makes people move across the country and cut their hair. It makes armies march into battle. It makes people weep. And all it is, is air. So that's magic. I just couldn't believe that something could have that much power over me. I couldn't see it, I couldn't touch it and I couldn't taste it, but somehow it was affecting me so profoundly. That's pretty much why I've dedicated my life to music."

To read the entire interview and see the gear Moby uses to make magic, visit guitarcenter.com.

MOOG MINIMOOG VOYAGER ELECTRIC BLUE

(VYMIN0011)
LIST: $3556.00

$3425.00

NEW ALBUM
INNOCENTS
Available on iTunes
MOBY.COM

Guitar Center

Fig. 1. Pressing the FX icon brings up the SSL EQ and dynamics. Additional editing parameters for the built-in convolution reverb are also available.

interface and sample engine, there are no immediate surprises. In addition to the main parameters, SD3 features a simple delay and filter section. The tuning section provides Play's traditional tuning that affects both pitch and playback speed (A) and a tuning mode that does not affect speed (B), also with a high/normal quality switch. All of the live loops folders can be tempo-synced to your DAW.

Rhythmic Collection

SD3 is divided into a Quickstart folder (an introduction to the library), followed by seven categories: big drums (excluding taikos); gongs, clocks and waterphones; metals; shakers; small drums; taikos; and woods. A collection of tempo-synced "Mickey Hart Live Loops" was derived from a multi-instrument jam session including Hart, producer Nick Phoenix, and percussionists Greg Ellis and Chalo Eduardo.

There are too many great sounds to cover, but there are audio demos online. A few standouts include the taiko drums, which cover large to small in great detail. The "Dragon" hits are huge and the gong collection is one of the best ever sampled. The metal collection can be eerie or ethereal, and I love the "Chimes Burma." The frame drums and clockworks are exceptional. The live loops do feel *very* live. Throw a loop into your DAW, mess with the filter, and you've got an instant mood bed.

Many of the instruments feature an average of four round-robin notes per key, with several having six, eight, or even 12 notes. There doesn't seem to be much velocity switching between samples, and the articulations are typically spread across the keys. However, there is scripting for velocity affecting the volume, tone, and envelope of the notes in a very musical way. The result is a very playable and dynamic feel once you become familiar with how instruments are key-mapped.

Play 4 Engine

SD3 is the first library to be hosted in the new Play 4 engine. Play 4 includes a new Mixer view that allows the user to control level, pan, and effects. Each instrument can be expanded to five channel strips for each virtual mic array: Close (up to eight mics near the instrument for a drier sound); Mid (a tree of mics 15 feet away); HiFi (a slightly wider "super-clean" pair of mics 15 feet away); Main (a Neumann M50 Decca tree array 20 to 25 feet away); and Ribbon (vintage RCA ribbons 20 to 25 feet away). Clicking the channel strip name automatically loads the associated samples.

All of the mic positions sound phenomenal. EastWest Studio 1 (formerly the vaunted United Western) has a room tone and decay that is well known to be great for drums and percussion. Instruments open to a default blend of Close and HiFi mics that's immediately useful without additional reverb, although you can most certainly dive into loading the other mic arrays. Blending the various mic positions gives you a staggering amount of control over tone, and lets you dial in professional depth well beyond what can normally be done with dry samples and multiple reverbs. When even more ambiance is desired, the included true-stereo convolution impulse responses are imported directly from EastWest Spaces, one of my current favorite reverbs.

Play 4's new effects are courtesy of SSL and sport a filter, EQ, compressor, gate/expander, and a transient shaper (see **Figure 1**). Effects are available on each individual mic array and the master output. In addition, a single SSL stereo bus compressor is available per instrument. EQ and compression are certainly welcome additions; however, the samples sound so great that I rarely felt the need for effects. The new mixer and effects of Play 4 will be available in future Play libraries. Older Play libraries can add the SSL effects for a one-time upgrade fee of $99—which covers everything you own.

The transients are so well recorded in SD3 that in my initial tests, some of the patches overloaded the mixer (in Play and/or Logic) when played at the hardest velocities. You can work around this by watching your levels, which you should do even more so when combining multiple mic perspectives. I told EastWest about this experience, and they're working on a fix.

Conclusions

Although I've had my issues with the Play engine in the past, my experience with SD3 and Play 4 was pleasant. I experienced a smooth workflow and was able to concentrate on the music and explore the massive amount of cool sounds.

In practice, I generally had no idea what I was doing with many of the instruments, which made for a lot of fun. I'd usually poke around to get an idea of what an instrument could do, and then just start playing until something sounded good. It's a simple matter to move notes to "better" articulations after the fact, and that's what I did if I was feeling picky. There's both a lot of instant gratification for those not obsessed with being convincingly authentic and plenty of meat for those who are.

There are so many great sounds to choose from in SD3, especially for composers working in film, TV, video games, and multimedia. The recordings and playing are stellar, and blending the mic arrays can make you sound like a Hollywood A-lister. ♫

Bottom Line

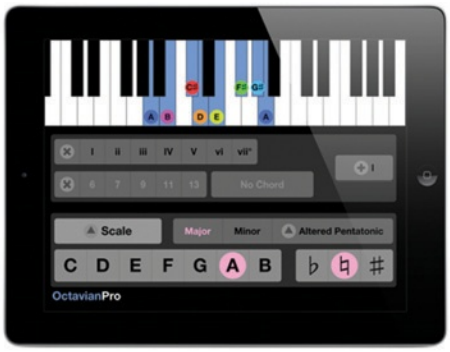
An amazing assortment of ethnic world percussion that sounds fantastic and complements StormDrum 2. Perfect for composers working in film, TV, gaming and world music.

$395 on DVD | $479 shipped on hard drive
soundsonline.com

Hear It Now!

▸ Original audio examples.

keyboardmag.com/january2014



Octavian Pro
By Bitnotic

Available on the iTunes App Store

Definitive music theory resource for students, teachers, songwriters, and musicians. Features 500+ scales, 50+ chords, progression sequencer, dictionary, and more. Keyboard Magazine said of Octavian 1.1.0 (Jan 2010): "It's a cheat sheet no keyboardist should leave home without." Compatible with iPad, iPhone, and iPod touch.

SRP: $2.99
www.bitnotic.com
info@bitnotic.com

AT2020USB+ Cardioid Condenser USB Microphone
By Audio-Technica

Available Now

The AT2020USB+ delivers Audio-Technica's renowned articulation/intelligibility plus: USB output for digital recording; high-quality A/D converter (16 bit, 44.1/48 kHz sampling rate); headphone jack for no-latency monitoring; and mix control that blends microphone and pre-recorded audio.

MSRP: $279.00
www.audio-technica.com
pro@atus.com

Lounge Lizard EP-4 - Electric Piano
Applied Acoustics Systems

Available Now

Lounge Lizard EP-4 is an exceptional re-creation of the classic electric pianos. Not only does Lounge Lizard EP-4 deliver the authentic tone of the originals but it also preserves their action and feel.

Customize your sound with access to piano parameters and a configurable multi-effect section or simply pick a preset from the extensive library of custom electric pianos.

SRP: $199
www.applied-acoustics.com
888-441-8277

ONE RED DOG MEDIA

Arctic ProSynth

BY FRANCIS PRÈVE

ONE RED DOG MEDIA'S LATEST IOS APP, ARCTIC PROSYNTH, IS THEIR NEWEST entry in the iPad virtual analog wars. At first glance, there's not a lot we haven't seen before, but dig a bit deeper, and there's a real attention to detail and quality in this ten-dollar virtual analog synthesizer.

For starters, the developers opted for big knobs and multiple pages for Arctic Pro's parameter set. This is an often-overlooked detail by countless iOS developers and adds greatly to this synth's tweakability.

As for the synth engine, it's pretty straightforward stuff, but with a few nifty enhancements that give the synth its own character. Sure, it's another dual-oscillator affair with a pair of resonant multimode filters that can be arranged in series or parallel—like the majority of iOS synths—and of course, there's an LFO and three envelopes for modulation tasks. So it's easy to glance at its screen shots without feeling too much app-lust.

However, after digging into this synth for a few hours, here are a few highlights that set Arctic Pro apart from the pack.

Each oscillator sports the holy trinity of analog waveforms—saw, square, and triangle—and the absence of any sort of pulse width control is rather conspicuous, frankly. But upon further inspection, two new parameters caught my eye: Hyper Mix and Spread. These two knobs give Arctic Pro the ability to do stacked oscillator tricks (*à la* Roland's super saw wave) with all three waveforms, which is fantastic for massive festival-style chords and pads.

What's more, Arctic Pro includes an onboard vocoder that works with the iPad microphone input. As vocoders go, this one's pretty solid overall. While it's nowhere near as complex as a standalone product like iVoxel, it's great for old-school robot voices and Daft Punk-ish effects. Arctic Pro also includes a bunch of more standard effects like chorus, delay, EQ, phaser, reverb, and a flexible distortion unit with six different modes.

One of the biggest features that sets Arctic Pro apart from the rest of its peers is a fantastic collection of presets, courtesy veteran sound designer, John "Skippy" Lehmkuhl. John's work on classic Korg synths is legendary—and these presets really show off his skills. Silky pads, scorching leads, acid bass, and a collection of patterns that make excellent use of Arctic Pro's onboard step sequencer gives this synth an air of *quality* that's often missing from products by other iOS-centric startups.

As for other iOS amenities, Arctic Pro *is* fully buzzword compliant. You can record your performances to WAV or MIDI files. Audiobus and AudioCopy are available as well, so you can integrate Arctic Pro's output with your other iPad apps. SoundCloud upload is supported as well, as is the ability to transfer presets and banks via WiFi or iTunes. It even includes Korg's WIST synchronization.

So, despite its similarities to a lot of other iPad soft synths, Arctic Pro really is a different beast and certainly worthy of a closer look, especially if you're an iPad performer who absolutely has to have it all. ♫

Snap Judgment

PROS Hyper-oscillators deliver fat, thick textures. Integrated vocoder and effects. Excellent presets. Audiobus, AudioCopy, and WIST.

CONS A little short on matrix modulation amenities.

Bottom Line

Another excellent analog emulation for your iPad rig.

$9.99 | onereddog.com.au

Classifieds

Categories

Acoustic Products & Services

Education & Tutorial

Sounds, Sequences, & Software

Studio Furniture

For Sale

Buying or selling instruments through our Classified Ads offers you convenience, a big marketplace, and a wide range of instruments and prices. However, buying mail-order does have its drawbacks, too. Keyboard Magazine suggests the following guidelines to help the buyer and the seller in these transactions: 1) Get a written description of the instrument, which should include the serial number. 2) Get front and back photos of the instrument. 3) Get a written purchase agreement, with a 24-hour approval clause allowing the buyer to return the instrument for a full refund if it does not meet reasonable expectations.

Acoustic Products & Services

Acoustics First®
Toll-Free Number: 888-765-2900
SOUND AND NOISE CONTROL MATERIALS
Web Site www.acousticsfirst.com

Education & Tutorial

Learn jazz piano on the internet at
www.JazzPianoOnline.com

Sounds, Sequences & Software

www.VintageKeyboardSounds.com
Authentic **MELLOTRON, B3,** and **COMBO ORGAN SAMPLES.** All Formats Supported.
562-856-9333

BAND-IN-A-BOX IMPROVEMENT PRODUCTS***
You can put a Better-Band-In-Your-Box.
Norton Music (since 1990)
www.nortonmusic.com

TO ADVERTISE WITH US CONTACT:
MICHELLE EIGEN
650-238-0325
meigen@musicplayer.com

Studio Furniture

For Sale

www.B3GUYS.com
Hammond Organs & **Leslie** Speakers
KeyB Organ - **Trek II** Products
Sales – Service – Parts – Rentals
info@b3guys.com or 615-438-8997

AD ORDER FORM

An ad in *Keyboard* 's Classifieds reaches more than 16,900* serious musicians for only $2.40 per word plus $7.00 for an address. Minimum charge: $25.00. Please underline words to appear in bold type and add $0.50 per every bold word. Please indicate clearly any words to appear in all caps and add $0.25 per every cap word. Each phone number, e-mail address, or website address counts as one word. Call for display rates. 3 months minimum schedule required. Deadlines are the 8th of the month, 2 months prior to cover date. Businesses must list business name in ad. All ads must be received in writing, paid in full in advance. All ads must be music-related.

Retail advertisers may not list discounted prices or percentages on specific models, unless items are used or discontinued. Advertisers must provide us with complete name, street address, and phone number, whether or not included in the ad copy (you may list a PO Box address in your ad, however). Mail ads to: *Keyboard* Classifieds, Attn: Contessa Abono, 1111 Bayhill Dr., Suite 125, San Bruno, CA 94066. FAX (if paying by MasterCard, or Visa): (650) 238-0263. For more information, call Michelle Eigen at (650) 238-0325; E-mail: meigen@musicplayer.com. (*Audited circulation; does not include pass-along rate.)

Company Name_____ Contact Name_____

Address_____ City_____ State _____ Zip _____

_____

Telephone_____ E-mail_____

Please print your ad clearly. Use a separate sheet of paper if you need more room.

_____

_____

_____

_____

_____

(do not include address when counting words)

Category: ❒ Marketplace ❒ Duplication ❒ Talent and Employment ❒ Sounds/Sequences/Software ❒ Mixing/Mastering ❒ Instruments ❒ Accessories ❒ Gear for Sale ❒ Acoustic Products & Svc's ❒ Studio Furnishings ❒ Other

TO COMPUTE COST OF AD

#_____words x $2.40 = _____
#_____bold words x $ .50 = _____
#_____ ALL CAPS wds x $ .25 = _____
Address $7.00 = _____
Total cost per issue = _____
(minimum $25.00)
x number of issues to run x _____
Total payment = _____

❒ Payment enclosed, or Charge my
❒ Visa ❒ MasterCard

Card #

Expiration date:

Signed:

ANDREW SOUTHAM

5 THINGS WE'VE LEARNED ABOUT Interpreting Music

BY THE 5 BROWNS

INTERPRETING GREAT PIECES OF MUSIC LIKE "THE RITE OF SPRING" BY Stravinsky is really a lifelong endeavor. Any one performance is a document at that moment of how you hear and feel a particular piece of music. A great interpretation is much like a great musician, in that it will continually change and evolve over time. Each musician interprets music differently, and since we're not necessarily writing the music at hand, the interpretation is where we put our own mark on it. We're careful to avoid disfiguring a piece of music to better suit our personal expressions, just as we are in acknowledging the importance of expressing our emotions through it. Since our group consists of five pianists, we feel the end interpretation is a culmination of our best ideas together.

1. Play Music You Love

An important element to interpreting music is to play music that speaks to you. Don't just play *any* Beethoven Sonata or Chopin Nocturne. Listen to all of them and pick the one that speaks to you. When the five of us choose repertoire to perform in concert, everyone has to feel like they can't live without playing that piece. That is how it is when we play Stravinsky's "The Rite of Spring." We play like our lives depend on it because honestly, we feel very nearly like they do. **Desirae**

2. Listen to as Much Music as You Can

You can never listen to too much music. Every performance you hear, whether in concert or on a recording, will help you decide what you like, what you don't like, and especially what you love and can't live without. The five of us got season tickets to Carnegie Hall one Christmas when we were still teenagers. The experience of hearing that much excellent music changed my life and shaped how I like to hear music interpreted. **Deondra**

3. Use Longer Lines

When in doubt, always err on the side of using *longer* harmonic and melodic lines. This will keep a particular piece moving to its most important moments and become less plodding. Know where the key harmonic climaxes are, and always make sure you're moving towards them in some way, even if the harmonic line is very long. Know where the melodic phrases peak and end, and always make sure each note comes from or leads to somewhere specific. **Greg**

A global force in classical music since the release of their self-titled debut album, the **5 Browns**' new live album *The Rite of Spring: The 5 Browns Live at the Arthur Zankel Music Center* is out now on the Steinway and Sons label. The 5 Browns are not only known for being the first five siblings all to be accepted to the famed Juilliard School, but also for their incredible showmanship and virtuosity. Find out more at the5browns.com.

4. Step Back from Famous Interpretations

I just learned the Aria from Bach's "Goldberg Variations." I'm so familiar with Glenn Gould's interpretations of them that I actually stepped away from them for a while in order to create my own performance of the Aria. The closer I was to Gould, the more I couldn't put my *own* mark on it. So I put his recordings away for a while. When I finally learned the Aria, I remembered elements of his interpretation as an homage, but now most of how I play it consists of my thoughts, my breaths, my colors. **Melody**

5. Find Inspiration in All Music

Finding inspiration can be difficult sometimes when practicing and playing the piano. I have found inspiration by going to *all* types of concerts including classical, pop, indie rock, bluegrass, and jazz. There's nothing more inspiring to me than watching great artists perform. **Ryan**

"MY WORLD IS MUSIC. MY NOTATION IS FINALE."

Pulitzer Prize- and Grammy® Award-winning composer Jennifer Higdon chooses Finale

FINALE 2014

To notate music is to look forward – to the performance, and beyond. With faster workflow, notation enhancements, backward and forward compatibility, and improvements to its core, Finale 2014 is your path to tomorrow.
Look forward: Create your musical legacy.

finale®

Own the future today | finalemusic.com

MOTU
motu.com

Why is the new 8PRE USB two products in one?

It's a USB audio interface *and* an optical expander.

Introducing the...

8PRE USB

16 x 12 USB audio interface and optical expander with eight mic inputs

- **8 studio-grade mic preamps** — with pristine sound, plenty of gain, individual 48V power, and 20 dB pad.
- **USB or optical** — connects to any Mac or PC with USB, or to any digital mixer or audio interface with ADAT optical.
- **Flexible combo jacks** — connect mics, balanced line inputs, and (hi-Z) guitars.

- Individual mic gain, 48V power and pad
- 16 inputs and 12 outputs
- 96 kHz recording
- 8-channel optical, even at 96 kHz
- 16 channels of MIDI input/output
- On-board CueMix DSP mixing
- Separate control of mic gain & mix vol

- Five-segment metering for mic inputs
- On-board SMPTE generator/sync
- Across-the-board driver compatibility
- CueMix software for Mac and PC
- Tuner, oscilloscope and other tools
- AudioDesk® Workstation software
- Removable brackets for desktop use

©2013 MOTU, Inc. • 617.576.2760 • 617.576.3609 fax • www.motu.com • info@motu.com • MOTU is a registered trademark of Mark of the Unicorn, Inc. All other trademarks are the property of their respective owners.